Bihar District Gazetteers

SINGHBHUM

Bihar District Gazetteers

SINGHBHUM

By

P. C. ROY CHAUDHURY, M.A., B.L.,

Special Officer, Gazetteer Revision Section,
Revenue Department, Bihar, Patna.

PRINTED BY THE SUPERINTENDENT
SECRETARIAT PRESS, BIHAR, PATNA
1958

[*Price—Rupees Ten only.*]

PREFACE.

The first District Gazetteer of Singhbhum was edited by L. S. S. O'Malley, I.C.S., and published in 1910. At that time Singhbhum was a part of the old province of Bengal. O'Malley's preface to the book ran as follows :—

> " I have much pleasure in acknowledging the assistance which I have derived, in compiling this volume, from the Final Report on the Settlement of the Kolhan Government Estate by Mr. J. A. Craven, from the Final Report on the Survey and Settlement Operations in the Porahat Estate by Mr. J. H. Taylor, from the Final Report on the Operations for the Preparation of a Record-of Rights in Pargana Porahat by Mr. T. S. Macpherson, I.C.S., and from the Final Report on the Survey and Settlement Operations in the Saraikela and Kharsawan States by Mr. C. W. E. Connolly. Mucn of the information contained in this volume is taken from those reports ".

In 1815 Walter Hamilton in his East India Gazetteer (John Murray, London) had mentioned that Singhbhum had Zamindars, many of whom were " robbers by profession, and keep robbers in their pay. They are under no controul being themselves magistrates with unlimited powers. They used formerly to make depredatory incursions into the British territories."

The British occupied the district by the 4th decade of the 19th century and when Hunter wrote his Gazetteers a few decades after, the administration had stabilised. O'Malley had followed Hunter closely, and, as he mentioned, his main sources were the Reports of the Settlement Operations. An excellent source material in the shape of the Old English Correspondence Volumes in the District Record Rooms of Singhbhum and Ranchi does not appear to have been utilised by O'Malley. This was due probably to the perspective and that was to produce essentially an administrator's handbook.

The passage of time has brought in basic changes in all that constitutes life in this picturesque district of many-sided

interest and very great possibilities. The changes in the course of the last five decades since O'Malley's Gazetteer was published make it imperative to re-write the texts from a somewhat different angle. The Table of Contents had to be altered substantially for the same reason. Some of the portions of the old Gazetteer have, however, been retained in chapters like Physical Aspects or Directory with necessary changes. Text of one chapter of the last Gazetteer is republished as an enclosure. Although many of the issues of this chapter have become obsolete the text has a great value.

The task of re-writing the District Gazetteer of Singhbhum had its own difficulties. There have been no districtwise Survey and Settlement Operations recently. There have been frequent changes in the administrative set up. The march of events has been extremely rapid and the face of the district is being changed by industrialisation which brings in fresh problems. Since 1947 when India attained her independence the character of the State itself has changed.

In this task the old records, published and unpublished documents in the National Archives, New Delhi, West Bengal Archives, Calcutta and the Record Rooms at Chaibasa and Ranchi have been utilised to some extent. The dust-laden and partially crumbling Old English Correspondence Volumes from 1833 to 1875 available in Singhbhum Record Room form the basis of " Singhbhum Old Records " which is a sister volume to this book. For the later events I have derived a good deal of help from various published books, Government reports and data supplied by institutions and collaborators.

An attempt has been made to provide an objective book of reference for a wide range of readers including politicians, researchers, writers, journalists, teachers, students, and, by no means, least, the interested man in the street.

A book of this type can only be compiled by the pooling of resources, personal contact, observation and study. My previous official assignments in Chotanagpur were helpful Personally I have known Jamshedpur intimately since the last 35 years. I am particularly indebted to Mr. P. N. Mukherji, Public Relations Officer and Mr. B. D. Ichaporia of Tisco, Dr. S. C. Chatterji, F. N. I., Head of the Department of

Geology, Patna University, Dr. Surajit Sinha, Department of Anthropology, Government of India, Calcutta, Dr. D. N. Mazumdar, Head of the Department of Anthropology, Lucknow University, Mr. Adrish Banerji of Archæological Department, Government of India, Mr. J. N. Sinha, Chief Conservator of Forests, Bihar and Editor of " Statesman ", Calcutta. Mr. Nalini Mohan Sen, a very old lawyer of Chaibasa in spite of his feeble health gave me valuable information covering the last sixty years. Mr. M. K. Ghosh, M. P. acquainted me with the details of the labour movement in Jamshedpur from its very inception. Mr. L. Dayal, I.A.S., Deputy Commissioner, Singhbhum took a personal interest in collecting some data and in going through most of the drafts. I also acknowledge my indebtedness to the Geological Survey of India, Calcutta, the Metereological Department of India, Poona, the Directorate of National Archives, New Delhi, Public Relations Office, South Eastern Railway, Calcutta, Asiatic Society of Bengal, Calcutta, National Library, Calcutta and the Historical Records Division, West Bengal Government for their help.

For the photos, Mr. S. A. Shere, Curator of Patna Museum, Mr. P. N. Mukherji of Tisco and Mr. J. N. Sinha, Chief Conservator of Forests have to be thanked. I also convey my thanks to Mr. A. C. Sarkar of Bihar Surveys Office, Patna for reproducing the maps and to Mr. S. N. Chatterji and his staff of Secretariat Press, Gulzarbagh for the printing of the book.

The compilation of this Gazetteer was taken into hand when Mr. Krishna Ballabh Sahay was the Minister for Revenue in Bihar. I am grateful to him and the present Revenue Minister, Mr. Binodanand Jha for their great encouragement and affording me full facilities to complete the work.

PATNA:

The 23*rd July*, 1958.

P. C. ROY CHAUDHURY.

DISTRICT GAZETTEER OF SINGHBHUM.

PLAN OF CONTENTS.

TABLE OF CONTENTS

CHAPTER I

PHYSICAL ASPECTS

CHAPTER II

GEOLOGY AND MINERAL RESOURCES

CHAPTER III

HISTORY

LIST OF PLATES.

LIST OF MAPS.

ERRATA.

Page 1, para. 2, line 8, *read* " 199,922 " *for* " 62,370 ".

Page 14, footnote, line 12, *read* " Orissa " *for* " Orrisa ".

Page 17, para. 1, line 3, *insert* " comma " *after* " asah ".

Page 51, para. 4, line 1, *read* " are " *for* " is ".

Page 63, para. 1, line 6, *read* " Kalimati " *for* " Kalamati ".

Page 65, para. 2, line 11, *read* " Constantine " *for* " Costantine ".

Page 88, para. 2, line 17, *read* " by " *for* " in ".

Page 121, para. 1, line 12, *insert* " in Hazaribagh " *after* " forests ".

Page 225, sub-heading, *read* " Religion " *for* " Rigion "

Page 236, para. 2, line 9, *read* " karanj " *for* " karang ".

Page 286, para. 6, line 2, *omit* " the ".

Page 387, para. 2, line 7, *read* " Jugsalai " *for* " Jugselai ".

Page 394, para. 2, line 6, *read* " Jugsalai " *for* " Jugselai ".

GAZETTEER OF THE SINGHBHUM DISTRICT.

CHAPTER I.

PHYSICAL ASPECTS.

General Description.

The district of Singhbhum which forms the south-eastern portion of Chotanagpur Division, is situated between 21° 58′ and 23° 36′ north latitude and between 85° 0′ and 86° 54′ east longitude. It extends over 4,475 square miles and has a population of 14,80,816 according to the census of 1951 consisting of 7,52,424 males and 7,28,392 females.

Singhbhum district has had an addition when under Bihar Government notification no. 960/C.R. 122(90)—49, dated the 2nd August, 1949, the feudatory States of Seraikela and Kharsawan, which previously formed part of the State of Orissa, integrated to it. The total area of Seraikela and Kharsawan, which now forms a separate administrative unit as a subdivision of Singhbhum district, is 590 square miles with a population of 62,370 according to 1951 census.

There was a further addition to the district when 39 villages of Tamar police-station of Ranchi district merged into it under Government notification no. 1/P4-1019/54-P.P.—3967, dated the 5th August, 1954. The area of these villages comes to 83 square miles with a population of 16,355. In 1956 there was a further accretion to the district. On the basis of the Report of the States Reorganisation Commission portions of the previous Manbhum district in Chotanagpur Division came over to the district of Singhbhum. Under Government notification no. A-9908, dated the 24th October, 1956, the area of Chandil, Patamda and Ichagarh police-stations was incorporated into the district of Singhbhum. The area of these police-stations is 594 square miles and the population, according to 1951 census, is 2,04,379 consisting of 1,02,898 males and 1,01,481 females. The area of Chandil and Ichagarh police-stations was added to Seraikela subdivision while Patamda was added to Dhalbhum subdivision. The present extreme length of Singhbhum district from east to west is 124 miles and the breadth from north to south is 84 miles.

Singhbhum district has now four administrative units. The Kolhan, a Government estate, occupies the whole of the south and the revenue-free estate of Porahat is on the north-west of the district. Most of Kolhan is in the Sadar subdivision and the headquarters of the Sadar subdivision is at Chaibasa. With the abolition of zamindaries it will no longer be correct to say that Kolhan is the only Government estate. The revenue-paying estate of Dhalbhum which comprises the triangular projection to the east of the district has now been taken over by Government. Dhalbhum is now an administrative unit under a Subdivisional Officer whose headquarters is at Jamshedpur. Seraikela and Kharsawan form a separate subdivision as mentioned before and the headquarters is at Seraikela. The principal town is Jamshedpur although the administrative headquarters is at Chaibasa. The administrative headquarters of the district was at Chaibasa but this was shifted to Jamshedpur owing to the great importance of Jamshedpur in the Second Great World War, due to the Japanese threat to bomb the works. The administrative headquarters was again shifted to Chaibasa in September, 1953.

BOUNDARIES.

The district is bounded on the east by Midnapore district of West Bengal, on the west by Ranchi and portions of Orissa State, on the north by the districts of Ranchi and Purulia, and on the south by portions of some of the districts of Orissa State (Mayurbhanj, Keonjhar and Bonai). The boundaries for the most parts follow the crests of unnamed hill ranges which wall in the district; but the river Subarnarekha marks a portion of the northern and southern boundaries, and with one of its tributaries, the Godia, separates Singhbhum from the former feudatory estate of Mayurbhanj which is now a district in Orissa, for some distance on the south-east. Farther west, the Baitarani river forms the boundary for 8 miles between Keonjhar district in Orissa and the district of Singhbhum, while one of its tributaries, the Kongera, separates it from Mayurbhanj. On the extreme north-west the North Karo and Phuljhur rivers form a natural boundary between Singhbhum and Ranchi.

ORIGIN OF NAME.

The name Singhbhum,that is, the land of the Singhs, is most probably derived from the patronymic of the Rajas of Porahat, to whom the north of the district was once subject. Another theory is that the name is a corruption of Sing Bonga, the principal god-head of the Hos, the Adibasis of Singhbhum district. In the early accounts the name Singhbhum is applied to the territory originally ruled over by the Singh Rajas of Porahat (that is, the Porahat estate and the estates of Seraikela and Kharsawan), as distinguished from the Kolhan and Dhalbhum.

CONFIGURATION.

The district forms part of the southern fringe of the Chotanagpur plateau and is a hilly upland tract. There are hills alternating with valleys, steep mountains, deep forests on the mountain slopes, and, in the river basins, some stretches of comparatively level or undulating country. In the north-west the highest peaks have an altitude of more than 2,500 feet and in the south-west, there is a mass of hills, rising to a height of nearly 3,000 feet, in the tract known as the Saranda *Pir*. There are also a number of small ranges along the northern marches of Seraikela and Kharsawan and in the south of Dhalbhum on the confines of the Mayurbhanj, as well as on its northern boundary.

The centre of the district consists of an upland plateau enclosed by hill ranges of no great altitude. To the west they approach to within a few miles of Chaibasa, and confine the view in that direction, but to the east, north and south they are more distant with higher hills beyond them. This central strip, extending from the Subarnarekha river on the east to the Angarbira range to the west of Chaibasa, is one of the most fertile parts of Singhbhum. It consists mainly of well cleared open country, and varies in elevation above sea level from 400 feet near the Subarnarekha to 750 feet round the station of Chaibasa. To the south of it is a higher plateau with similar expanses of rolling country, the level of which rises to 1,500 feet at Gamharia and falls to 1,000 feet in the Baitarani valley in the south.

On either side of these plateaux the country is of a different character. To the east in Dhalbhum is the valley of Subarnarekha flanked by long hill ranges or detached outliers; but in the extreme south-west the country is fairly open, while the south-eastern extremity is a fertile alluvial plain. To the west the rolling uplands give place to a hilly, almost mountainous tract in places clothed in virgin forest. Porahat to the north-west consists of hills, valleys and plateaux, with hill ranges and outlying spurs running in all directions. There is a fairly open belt of country stretching from north-east to south-west, through which the Bengal-Nagpur Railway now known as South Eastern Railway runs; but with this exception there is no level tract of any size, and where it is not hilly, the surface is undulating. The main level of this tract varies very much, reaching its minimum (680 feet above sea level) in the south-west at Anandpur, from which there is a continuous rise to Bandgaon on the north with an elevation of 2,002 feet. In the south-west, in the Saranda *Pir*, the hills culminate in a confused mass of hills and mountains covered with forest and jungle. This area is very thinly peopled, containing only a few small villages scattered on the hill slopes or nestling in deep valley.

To the north there is a fairly extensive undulating plain formed by the Sanjai valley. It is flanked on the north by a mountain chain, and it contains part of Porahat, Pargana Karaikela, Pargana Chakradharpur, a part of Kera, and about two-thirds of the former Kharsawan State. These all lie to the north of the Sanjai, which forms the boundary between them and Kolhan. The valley is two or three miles wide between Lotapahar and Sonua on the South Eastern Railway and further east is confined by a barrier of low hills. On emerging from these hills, the valley extends to a width of ten or twelve miles from Chakradharpur eastwards until it merges in the larger Chaibasa plain embracing the valley of the Roro and Kharkai.

Dhalbhum.

To the east is the Dhalbhum subdivision, which comprises the central valley of the Subarnarekha between 50 and 60 miles in length. It is flanked on the north by a high mountain chain and on the south by a rugged mass of hills (Dhanjori range) in which numerous feeder streams take their rise. The remainder of the district is made up of Porahat and the Kolhan areas.

Porahat.

Except for the North Karo valley and some 12 miles in the Koel valley, the Porahat area is a hilly tract extending to the Chotanagpur plateau, which is reached in the area of Bandgaon. On the extreme north the Phuljhur river comes down from the plateau in a cascade, which forms a pool supposed to be unfathomable and the subject of many legends. The only level or gently undulating land of any extent is found in the upper valley of the Sanjai near Sonua and Goilkera on the South Eastern Railway, and in Pargana Chakradharpur, an outlying portion of the Porahat area on the north bank of the Sanjai.

Kolhan.

The Kolhan consists of an upland tract sloping gently up from the Sanjai and Kharkai rivers on the north and north-east, as far as Gamharia, 21 miles south of Chaibasa. Thence there is a downward trend to the south and south-east, towards the boundary of Keonjhar and Mayurbhanj districts now in Orissa, which reaches its lowest point on the Baitarani river at about 1,000 feet above the sea level. The north-western portion of the Kolhan is occupied by a mass of hills extending from near Chainpur on the Sanjai, 12 miles north-west of Chakradharpur, to the South Karo river, which is the boundary between Kolhan proper and the Saranda *Pir*. To the east another range of hills extends from the Singhasan Hill, north-east of Gamharia, in a south-easterly direction to the Mayurbhanj border. There are also numerous isolated hills, low ridges and dykes of dolerite, which rise in rugged masses of broken rock. For the most part, however, the surface

consists of undulating ridges, between which the drainage runs off to join the larger streams, such as the Sanjai, Roro and Kharkai to the north, and the Kongera and Baitarani to the south.

The physical features of the Kolhan vary greatly. To the north and north-east the country is for the most part open and gently undulating, covered with numerous prosperous villages, and well cultivated, with hardly a trace of jungle. The southern portion of it is flat, open country, almost devoid of hills, also thickly populated and well cultivated. The south-western part is very rocky and is covered with jungle, while the east-central portion is open and undulating, and is well cultivated. The western and south-western parts of it are mountainous and thickly covered with jungle, and are very sparsely inhabited.

Saranda Pir.

The south-west of the Kolhan is known as Saranda *Pir*. It is a mountainous country with practically no undulating land except along the railway line in the valley of Koel, and in some groups of villages in the Koina river valley. Apart from the picturesqueness of the area fondly described as "Saranda of the Seven Hundred Hills", it had a formidable game preserve. In spite of certain amount of unnecessary destruction of wild life the area still remains one of the biggest sanctuary for wild life in India.

SCENERY.

The scenery in the more fertile tracts is not unlike that of Chotanagpur plateau. There are the same purple rocks, the same dark red of the upturned soil and the same alternate stretches of low-lying green rice crops and upland cereals. At places deforestation has taken place but in many places the previous clearings in the jungle have again become forest owing to the area being declared reserve. There has been a tremendous industrialisation of the area and roads have been opened up. Heavy motor vehicles are constantly moving and more and more areas are coming under cultivation or under mining operations and the natural scenery and environs of the area have disappeared to some degree.

In the hilly, often rugged and mountainous, tracts the scenery is wilder. Here the varying outline of the hills is a noticeable feature in the landscape. As a rule, they are of irregular contour and display a broken outline of sharp backed ridges and conical peaks. Some hills, however, have a bossy dome-like form, and are traversed by a network of dolerite dykes. The combination produces a peculiar effect, the appearance of which, as seen from the top of some high peak, has been compared to that of a chess-board. Some rocks, again, on the crests of the ridges and tops of the peaks appear split into vertical columns like ruined castles. Elsewhere, *e.g.*, near Kalikapur, south of the Chaibasa road, there are

a number of small flat topped hills which contrast strongly with the peaked sierra-like outlines of the longer ranges. For the most part, the hills are covered with forest wherever protected by the Forest Department; but elsewhere the trees have been ruthlessly cut down and the hill sides are rapidly becoming bare and rocky.

In the forests the wooded glens and valleys, traversed by rivers and hill streams, have a peculiar charm. Here will be found what Colonel Dalton described as "pools, shaded and rock-bound in which Diana and her nymphs might have disported themselves". Even in the hot weather, when the whole country seems parched and scorched the eye is refreshed by ever-green trees intertwined with long creepers and lianas. These glens are at their best in the cold weather, when the clear spring fed water ripples down over a rock strewn bed, or gently glides through brakes of reed or grass, between high banks fringed with ferns and mosses. Such a stream may be seen at Tholkobad, a forest village 1,800 feet above the sea, which contains a forest rest house and is fairly easy of access.

Hill System.

To the north two long spurs enter the district from the Chotanagpur plateau. The north-western spur is a formidable natural boundary, separating the district from Ranchi and Purulia. It is made of three subordinate ranges, which are separated by well-marked valleys, where the softer rocks have been eroded away. These ranges are formed of trap, quartzite and schists respectively. With the addition of Chandil area in 1956 to this district the entire Dalma range has come within this district. (Details of the Geology and Minerals of the district will be found in a separate Chapter.)

Trap range.

The trap range runs along the northern boundary, and here the hills attain the highest elevation, its principal peaks being Bicha (2,776 feet), Tatkora (2,910 feet) and Nanji (2,491 feet), all of which are on the border line and to the extreme north of Porahat, Karaikela and Kera respectively. As the valley of the Subarnarekha is approached there is a gradual descent till within a few miles of the river, after which there is an abrupt descent to the level of its bed. East of the Subarnarekha the range passes outside the district.

Quartzite ronge.

South of this range comes the quartzite range which seems to thin out gradually west of the Subarnarekha; but east of the river it forms a continuous range, the peaks of which are from 1,000 to 1,500 feet high. In the extreme east greater heights are attained as in Dharagiri (1,738 feet) and Lakhisini (1,636, feet), north-east of Mahulia station.

The influence of rock type on hill sculpture is seen in the hills where soft rocks like shale or phyllite is associated with hard rock like quartzite. The shale hills are typified by their well rounded contours but where they are capped by quartzite they have precipitous slopes. In the south-west of Porahat where the prevailing rocks are phyllites a type of country with striking sculpture has been formed. Here the surface is dissected into small hills with steep sides. The mica-schists in the plains tend to produce a gently undulating country as in the case of the shales, and in the hills they tend to form rather well defined ridges parallel to the strike. "Typical *bad* lands" have formed to the east of Gamharia (22°57′; 85°32′) where the Kharkai river cuts through thick alluvium overlying the mica-schists.

The traps of the Dalma Volcanic series, now turned into epi-diorites form precipitous hills extending for long distances as un-broken ridges. Numerous small streams have cut beautiful little waterfalls as they leave these hills in remote inaccessible places almost arched over by vegetation.

North-eastern spur.

The north-eastern spur leaves the plateau at a point about nine miles south of the other, and pursues a steady easterly direc-tion for a distance of 42 miles after which it sweeps round to south-east and south. Near its starting point from the plateau this spur is broken up into small detached ranges of hills with wide valleys intervening. Between Narayanpur and Rajdoha (near Asanbani) these ranges are larger and approach more closely to one another but it is only in its extension to the south-east of Rajdoha that the spur acts as a distinct watershed. The principal peaks on the spur are, proceeding from north-west to south-east. Lopso (1,612 feet), five miles east of Kharsawan, Okam (1,398 feet), a few miles south-east of Nuagarh, Chandar (1,107 feet), near Turamdih, Kapurgadi (1,651 feet), Siddheswar (1,477 feet), Kurudi (1,676 feet), Salberia with two peaks (1,799 feet and 1,845 feet), and Dalma (1,676 feet). In the schists on the northern flank of these hills the copper ores of Singhbhum occur.

South of the second spur, the granitic gneiss area of Central Singhbhum is entered upon. On the north, east and west it is fringed by ranges of hills formed of Dharwar rocks or rocks of the Iron-ore Series. The granitic rocks generally form monotonous plains, and the rugged granite topography characterised by tors and balanced rocks are found only in east Seraikela and the ad-joining part of Dhalbhum. The reticulating dykes of newer do-lerite which cut through the Singhbhum granite forms long ridges some of which rise several hundred feet above the granite plains. One of these is Bagmundi to the south-west of Kuali in Dhalbhum which rises to a height of 1,997 feet or about 1,200 feet above the plain. To the west of this central area, and intervening

between it and the highland of Porahat there is a tract in which both granitic and Dharwar schists rocks occur.

In Porahat to the north-west the general trend of the hill ranges is from north to south or from north-east to south-west, the eastern and southern slopes being the most precipitous. Several of the peaks are more than 2,000 feet above sea level, such as Bamiaburu (2,135 feet), south of Kutipiri, Ragra (2,131 feet), south east of Gudli, and Kurundia (2,553 feet), south of Kesadi.

On the south-west is a series of hills without any general name, which occupy the greater part of the Saranda *Pir*. They include a number of high peaks, such as Buda (2,738 feet), Notuburu (2,576 feet), Dinda (2,485 feet), Sangahatu (2,232 feet) and Umai (2,063 feet). This mountain mass extends northwards up to the borders of Porahat, but is not connected with the plateau of Chotanagpur. A remarkable break occurs to the north, near the common boundary of Saranda and Porahat, where the ridge dies away, and leaves a pass a little over 1,100 feet high between these hills and the spurs of the Chotanagpur tableland. Through this natural gap the Bengal Nagpur Railway was constructed, but it was found necessary to bore a tunnel, about 1,400 feet long, through the hill at Goilkera below this pass. A conspicuous spur of the Saranda hills stretches out towards Chaibasa and culminates in the peak of Angarbira, 2,137 feet high; while twelve miles to the south-west of the station the hill of Marmarai rises to a height of 1,861 feet.

The central part of Dhalbhum, south of the Dhanjori range, is a hilly tract with several flat topped plateaux which owe their flatness to trap flows now turned into epidiorite. In this region there are s me hills with elevations over 2,000 feet. These are Kotwar-pahar (2,067 feet) and Charai-pahar (2,132 feet). The Rangamati-pahar at the eastern end of the Dhanjori range is 1,828 feet high and Dhanjori-pahar itself is 1,649 feet.

Principal Peaks.

The following is a list of the principal peaks of Singhbhum :—

Name.	Height in feet.	Situation.
Hindia	2,124	7 miles south of Kalikapur in Dhalbhum.
Kotuar	2,073	2 miles north-east of Hindia.
Lonjo	2,317	9 miles south-west of Chakradharpur.
Hararanga	2,550	2½ miles south-west of Khutpani on the Chaibasa-Chakradharpur Road.

Name.	Height. in feet.	Situation.
Angarbira	2,137	6 miles west from Chaibasa in the Bar-kela Saitba block.
Utri	2,264	7½ miles south of Sonua Railway Station in the Santara block.
Sakaruburu	2,518	4 miles north-west of Jilinggutu forest bungalow in Porahat.
Kurindia	2,558	2 miles north of Raigora forest bungalow in Porahat.
Ragra	2,131	6 miles north-west of Kutipir forest bun-galow in Porahat.
Bamiaburu	2,135	2 miles south of Kutipir forest bungalow in Porahat.
Patan	2,196	3 miles south of Leda hill in the Leda block in the Kolhan.
Umai	2,063	3 miles south of the Ghatkori in Ghat-kori block in the Kolhan.
Buda	2,738	7 miles south-west of Manoharpur Railway Station.
Sangahatu	2,232	6 miles south of Manoharpur Railway Station.
Notu	2,576	1½ mile north-west of Ghatkori in Ghat-kori block in the Kolhan.
Dindaburu	2,485	4 miles west of Tholkobad forest bungalow in the Kolhan.
Adalkham	2,491	2 miles west of Tonto forest bungalow in the Kolhan.

RIVER SYSTEM.

Singhbhum is drained by three river systems, those of the Subarnarekha, Baitarani and Brahmani. The watersheds of these three systems originate near Gamharia in the Kolhan and radiate north-west, south-west and east respectively from their common centre. These watersheds divide the Subarnarekha and its feeders from the Baitarani and its tributaries, and the latter again from the South Karo and Deo rivers, which feed the Brahmani through the South Koel. The tunnel on the South Eastern Railway pierces the narrow divide between the Subarnarekha and Brahmani systems, and at this point the watershed leaves the Kolhan, continuing in a northerly direction through Porahat and finally merging in the Ranchi plateau between the Bicha and

Tatkora hills. Of these three great rivers the Subarnarekha alone flows through the district. The Baitarani forms for about 8 miles the boundary between the Kolhan area and Keonjhar (in Orissa State) while the Brahmani drains the west of the district through its tributary, the South Koel, and its feeders, the North Karo and the South Karo, and the latter of which in its turn is fed by the Deo river.

All the rivers are fordable throughout the year except for a few hours at a time during the rains when they rise and fall suddenly after heavy rain. The banks are generally steep, and the beds are almost always strewn with boulders or consist of coarse shingle. Sand, however, is found in the Koel and Subarnarekha, and in parts of the Kharkai and Sanjai. None of the rivers dry up altogether in the hot season, but in most of them the water is very low in the hot season. In particular, the Sanjai though it rises in forests, runs very low in the hot season, and so does the Roro. The Koina, however, contains plenty of water in the height of the hot season even when no rain has fallen for many months. It has many more feeder streams than the Sanjai which may account for the difference. The catchment area of the Roro and its feeders, on the other hand, is almost entirely deforested. In some rivers barriers of rock crop up, and many have deep pools at intervals, which are sometimes 400 yards long. A considerable depth of water remains in them even in the dry weather, when the running portion of the stream itself almost disappears. The following is a brief account of the principal rivers.

Subarnarekha System.

The Subarnarekha is the largest river of Singhbhum, flowing through the district for about 70 miles and draining over 2,000 square miles. The river rises near Ranchi and enters Singhbhum from the north-west, forming the boundary between it and Purulia for some distance. It then flows south-east through Dhalbhum, and leaves the district at its extreme south-eastern corner. Its bed is rocky and its stream rapid until it reaches the level plains of Midnapore. It contains treacherous quick sand which is dangerous to cross. The name means the streak of gold and gold is found in its bed in minute quantities.

It appears that the amount of alluvial gold was greater in the past. The Subarnarekha has been identified as the Pseudostomos channel of Ptolemy (one of the five mouths of the Ganga according to Ptolemy).

The easternmost of the five channels, i.e., Antibole must formerly have been fed by the spill of the main river through the Subarnarekha channel. The connecting line probably was from Dhalbhumgarh to a little above Midnapore. Corroboration

that an old river flowed through Dhalbhumgarh is afforded by the extremely rounded stones and pebbles that are so plentiful even now. At the time of construction of the aerodrome near Narsinghgarh during the Second World War, military engineers while boring a well came across a very old ring bed more than 100 feet below the surface.

The eastern part of the central plain is drained by the Garranadi which breaks through the Dhanjori range separating the Narwa-pahar (1,057 feet) from the Rangamati-pahar (1,823 feet). It then turns south-east and flows parallel to the Dhanjori range and joins the Subarnarekha opposite Rakha Mines, west of Mahulia. The Loubhang joins the Garranadi where it turns south-east, after flowing out of the gorge. Another tributary of the Garra is the Dudhnadi which drains the Dhalbhum plain and joins the Garra before the latter enters the gorge between the Narwapahar and Rangamatipahar.

The short tributaries, south of the Subarnarekha which have their sources in the hills, are rapidly cutting back through the ranges on either side of the Subarnarekha river. The Garra might have flowed west into the Kharkai across the central plain but has been captured by the head waters of a small north-east flowing tributary of the Subarnarekha which has cut through the range. This may explain the steepness of the gorge through which the river now flows across the range.

On the north side of the Subarnarekha river, such tributaries as the Gurmanadi, Bagaldutanadi, and the Dimra Jhor owe their present trend across the phyllite ranges for similar reasons.

The extreme south-eastern part of the district is drained by another tributary of the Subarnarekha known as Sankh which joins the Subarnarekha about two miles south-east of Musabani. The Sankh with its numerous tributaries drains the north-eastern slope of the ridge whose crest-line generally forms the boundary between the Singhbhum and the Mayurbhanj districts.

The plain area drained by the Sankh and its tributaries is enclosed on the south-west, north and east by high ranges and opens only on the north-east along the valley of the Sankh, south-east of the copper mining centre of Badia. Bhagabandi (22° 25′N.; 86° 24′E.) is the most important market and settlement in this area.

The ridge forming the watershed and the boundary between the Singhbhum and Mayurbhanj districts has several peaks.

Kharkai.

The principal tributary of the Subarnarekha is the Kharkai, which is formed by the junction of two mountain streams rising in the eastern Kolhan range of hills,. namely, the Terlo and the Koranjai, of which the latter forms for about 18 miles the boundary

between the Kolhan and Mayurbhanj. The Terlo joins the Koranjai on the boundary, and some 4 miles lower down at the trijunction point of Seraikela, Mayurbhanj and the Kolhan, the river is known as the Kharkai. It continues in a north-westerly direction, forming the boundary of the Kolhan and Seraikela with several sharp bends one of which brings it within 5 miles to the north-east of Chaibasa. A few miles further north, at a point opposite the solitary conical Hindu hill (956 feet) it ceases to be the boundary and enters Seraikela running north and then east till it debouches in the Subarnarekha on the boundary of Kharsawan and Dhalbhum. It is joined by the Sanjai near Lengtasai about 5 miles south of Gamharia station on the South Eastern Railway. The length of the Kharkai proper is about 50 miles and it is fed by several streams from the Kolhan, among which may be mentioned the Iligara, the Jamiragara and the Roro.

Roro.

The Roro or Raro is about 36 miles in length and is joined by the Jamira just outside Chaibasa, which is situated on its eastern bank.

Sanjai.

The Sanjai rises in the forest clad hills of Porahat, north-west of Sonua. It flows in an easterly direction forming for about 30 miles the boundary between the Kolhan on the south and Porahat and Kharsawan on the north. It passes out the Kolhan near the village Keatchedlom, and falls into the Kharkai near Lengtasai. The Sanjai receives no streams worth mentioning from the south, but from the north it receives the Binjai which drains Karaikela, the Sankua from Kera, and several tributaries from Kharsawan.

Baitarani system.

The Baitarani for eight miles of its course is the boundary between the Kolhan area and Keonjhar. It drains about 400 square miles of the Government estate through a number of feeder streams, the chief being the Kongera which also forms part of the boundary between the Kolhan and Keonjhar. The river is identified by a section of the Hindus as the Styx of Hindu mythology, but the name is possibly only a corruption of Avitarani, meaning difficult to cross. About 4 miles to the west of Jaintgarh, an important village on its banks, there is a fall with a deep pool below it called Ram-tirtha which is a sacred bathing place among Hindus. Legend has it that Ram himself halted on the banks of the river when marching south to rescue Sita from the demon king Ravana.

Brahmani system.

The Brahmani drains about 1,200 square miles in the west of the district mainly through the Koel or Koil, which is called the South Koel to distinguish it from the river of the same name in the Palamau district.

South Koel.

The South Koel rises a few miles west of Ranchi and leaves the plateau in a fine fall of 120 feet near Belsiangarh. It enters Singhbhum from the west and after flowing 12 miles in an easterly direction is joined by the North Karo river, a few miles south of Gudli. The Karo descends from the plateau partly by a fine waterfall with a drop of 66 feet. In the north-west corner of Singhbhum the headwaters of the tributaries of the Karo river have cut deeply into the edge of the Ranchi plateau and form precipitous gorges. The Karo river descends from the plateau partly by a fine waterfall known as the Pheruaghag falls with a drop of 66 feet. It then bends to the south for another 12 miles receiving the waters of the South Karo from the south-east near Anandpur. The combined stream flows south for yet another 12 miles till near Manoharpur, where it is joined by the Koina. After this it turned to the west and passes into Gangpur now in Orissa State where it joins the Sankh, which flows into the Brahmani at Panposh. The Koel thus describes almost a complete semi-cirole in a course of about 36 miles through the district.

North and South Karo.

The North Karo also rises near Ranchi and has a course of about 12 miles in the district draining the hills of Porahat. Its principal tributary is the Phuljur. The South Karo rises in Keonjhar and has a course of 37 miles in Singhbhum through the hills of Saranda.

Deo.

The Deo river rises in the Kolhan on the western side of the Gamharia plateau and flows into the South Karo river after a course of about 35 miles. It receives the Puilgara, a fair-sized mountain stream, from the Santara forest block.

Koina.

The Koina river rises in the extreme south-east of Saranda, flows in a general northerly direction until within 10 miles of Manoharpur, when it flows in a westerly direction falling into the Koel at Manoharpur. It is about 36 miles in length, is fed by numerous streams rising in the Saranda forests, and contains abundant water in the driest season.

GEOLOGY.

Geologically Singhbhum is one of the most important districts not only in India but in the world. it may be observed that the remark in the old District Gazetteer of Singhbhum (1910) that Singhbhum is one of the most interesting districts in Bengal (at that time Bihar was a part of Bengal), though not on account of any great variety in the formations represented, does not hold good now. The Geology of Singhbhum along with her minerals forms a separate chapter in the Gazetteer.

VEGETATION.*

The hillocks on the plateau mostly form part of the dolerite dykes that run criss-cross all over the plateau. They are very low and in chains. Their top boulders are exposed. The thin soil has scrubs and bushes, chiefly some chasmophytes.

The hills fringing the central plateau are granitic in nature, low and covered with a few small trees or are completely barren. Lantana and other exotic weeds are seen. The wooded hillocks show *sal* or a mixed forest of deciduous species or bamboos.

The hills in other areas like North Seraikela, North Kharsawan, North Porahat and North Dhalbhum are made of sedimentary rocks and by weathering have collected some soil. They are covered with thick forest and have been excessively and unscientifically exploited in the past. Partly also due to mining operations and upland cultivation, the jungles are getting thinner and erosion is progressing rapidly.

More and more of the level lands are being brought under cultivation by deforestation. Such areas are prominent by the presence of lots of young *Butea* plants and *Phoenix acaulis*, *Khajur*, *Tar*, and bamboos being left over. In these areas because land is under upland crops and no bundhs are made in the fields erosion is progressing rapidly and in places the rocks lying below have been exposed.

Some of the hills on the plateau and the adjoining land are under protected forest. The jungle lands taken over from the zamindars are also being protected and if necessary afforested. All such areas show a mixed forest, the predominant species in which is *Butea frondosa*, either in pure stands or mixed with *Diospyros* species, *Bassia latifolia*, *Schleichera trijuga*, *Shorea robusta*, or with *Phyllanthus emblica*, *neem*, *Bombax* and *Dalbergia sissoo*. *Vitex negundo*, *Gymnosporia montana*, *Anona squamosa*, *Acacia arabica*, *Zizyphus jujuba*, *Holarrhena antidysenterica*, form the under shrubs especially towards the fringes. The climbers

---

*Literature consulted.

Bengal District Gazetteers—Singhbhum, 1910, *Calcutta*.

Dunn, J. A. 1929: *The Geology of North Singhbhum including parts of Ranchi and Manbhum Districts*, Calcutta.

Dunn, J. A. and A. K. Dey, 1924: *Geology and Petrology of Eastern Singhbhum and Surrounding Areas*, Calcutta.

The Botany of Bihar and Orissa, by Haines, H. H., C.I.E.

Imperial Gazetteer, Bengal, Volume 2, Singhbhum, 1909, Calcutta.

The soils of Bihar and a New Method of Determining their Manurial Requirements, Mukherji, H. N. 1952. Proc. Bihar Acad. of Agri. Sci. (1). 58—94.

Supplement to Botany of Bihar and Orrisa—Mooney, H. F., De., C.I.E.

are *Ichnocarpus*, *Combretum decandrum*, *Aganosma caryophyllata* and *Zizyphus oenoplia*.

In these jungles the immediately useful species like those used for cultivation of lac insect or silk worm are encouraged but it is these species that are at a disadvantage being shorn off of their leaves and branches.

Pure stands of *sal* are seen here and there, but most of them are young saplings or poles.

The cultivated lands in the towns, the depressed lands on the sides of railway embankments and the roads, as also the building sites, grow rice in summer.

These fields receive a lot of manure and are very fertile. Seeds of linseed, *Vicia sativa* or *Lathyrus sativus* are broadcast when paddy plants are in flowers. After harvesting of paddy, these form the winter crop.

In case the land has not been planted with winter crops and is left fallow, it shows a rich growth of *Sphaeranthus indica*, *Asteracantha longifolia* and various *Cyperaceae*.

Some small areas are utilised for the cultivation of vegetables.

The tanks in Chaibasa town and elsewhere are many and kept fairly clean. They show red lilies, *Aponogeton* species, *Potamogeton* species, and *Azolla* in the middle and *Jussiea repens*, *J. Fissindocarpa*, *Panicum proliferum*, *Leersia hexandra*, *Scirpus articulatus*, *Marselia*, etc., on the margins. In some sheltered corners, Spirogyra and other algae are seen. On their banks may be seen the same weeds as are seen along the roadsides.

In Chaibasa town through private plantation are seen *Casuarina equisetifolia*, *Cupressus* species, *Michelia champaca*, *Eleodandron serratus*, *Swietenia mahogany*, *Mimusops elengi*, *Pithecolobium dulce*, *Albizzia lebbek*, *Ficus religiosa*, *F. bengalensis*, *Melia azidarachta*, *Pongamia glabra*, *Cassia glauca*, *Tecoma stans*, *Plumeria acutifolia*, *Stereospermum suaveolens*, *Salmalia malabarica* *Tectona grandis*, *Ponciana regia*, as also *Citrus aurantium*, *Ficus carica*, *Carica papaya* and mango, etc. Most of these are useful for their timber, fruits, flowers or their decoration value.

Along the railway lines, in railway yards, particularly the big ones as in Sini and Tatanagar, along roadsides and all such places where the land receives more of organic matter, lots of weeds are seen growing. The first plants to appear here are of course the grasses and small dicots. These are followed by *Croton sparsiflorus*, *Cassia occidentalis* and other allied species, *Hyptis suaveolens*, *Lantana camara*, *Xanthium strumarium*, *Argemone mexicana*, and others. A few plants of *Solanum xanthocarpum* may be seen here and there. From these foci near towns

and railway stations, these plants spread all round, so much so that even in jungles where the land has been cleared for railways or roads, these plants have reached.

All such lands as are too far from towns and villages or are protected from grazing and cutting are followed by *Anona squamosa*, *Eugenia* species, Palms, *Gymnosporia montana*, and *Butea monosperma*, ultimately leading to a pioneer monsoon forest.

The major part of the plateau is occupied by cultivated fields surrounding isolated villages, which are located mostly near the roads and railways.

The northern and western faces of the hills are covered over with almost pure stands of *sal* and other species described in the chapter on Forest.

As the railway lines and roads have been taken to the most distant parts for easy exploitation of mineral resources, numerous railway stations and townships have sprung up, near which there has been much cutting of forest and grazing. In such areas are seen *Combretum decandrum*, *Acacia* species, bamboo, *neem*, *Holarrhena*, *Flacourtia*, *Woodfordia*, *Phoenix acaulis* and *Lygodium* species, and *Lantana camara*, *Croton sparsiflorus*, *Cassia* species and *Hyptis suaveolens* near the fringes.

On the exposed faces of rocks cut for the passage of railway lines and roads are seen many *xerophytic* grasses on the southern faces, and on other faces *Iseilma laxum*, *Themeda quadrivatvis*, *Pennisetum pedicillatum*, *Adiantum lunulatum* and other ferns. A few ravine-broomes are also seen.

In the Dhalbhum area the forests are mainly on the open ridges and in the undulating valleys and belong mainly to the reserved and protected types. The forests are very dense and contain tall trees both evergreen and deciduous standing close together and bearing lots of mistletoes, orchids and other epiphytes and a thick undergrowth. The trees have been mentioned before.

Some of the hill tops are barren due to exploitation for minerals.

The Ghatsila-Chakulia area, along the side of the railway line and the road is a comparatively level country, much land having been brought under cultivation and only trees of importance to the villagers such as *mahua*, *sahijana*, *neem*, *bargad*, *peepal*, *khajur*, *aam*, *imli*, papaya, *katahall* and *ber* are seen. On the hill side, in these areas there are forests present but they have been much exploited for a pretty long time and the jungles are in a poor state.

The North Kolhan area and the South Porahat area.—The condition here is bad so far as the vegetation is concerned. There has been much cutting and grazing. On the slopes of the hills are seen,

sal with *Gardenia* species, *Dillenia aurea*, *Phoenix acaulis*, *Terminalia chebula* and *Anogeissus latifolia*. In the undulating valleys, *sal* with *Careya arborea*, and *Dillenia pentagyna*, *asan harra*, *kusum* and *Pterocarpus marsupium*. On the even lands, a few *salai*, *dhaura*, *Cleistanthus collinus*, *Lannea grandis*, *Sterculia urens*, *Cochlospermum gossypium*, bamboo and *khajur* are seen. Self-introduced herbs like *Scoparia dulcis*, *Ageratum conyzoides*, *Clerodendron infortunatum* are seen.

More land has been brought under cultivation and therefore there has been much deforestation. Though the fields are giving good crops, there has been much erosion.

The hill ranges on the north-eastern boundary between Anandpur and Bandagaon.—There is a steep rise of about 1,500 feet, the mountain range being crossed by a *ghat* to reach the Ranchi district. The *ghat* area is covered with protected forest. Being the southern face, the jungle is not very thick and the species are mostly xerophilous ones.

Sal is present but the plants are not very tall and not close together. It is accompanied by many white barked trees (*sterculia urens*) as elsewhere and also a few *mahua*, *peepal*, *semal*, *palas*, *aam* and *Kydia calycina* accompanied by climbers like *Combretum decandrum*, *Dioscoreas*, *Smilax* species, and *Vitis* species, the undershrubs are *amla*, *Woodfordia*, *Indigofera pulchella* and tall grasses.

On the vertical faces of rocks grow tall grasses like *Themeda strigosa*, *Iseilema laxum*, *Pennisetum setosum*, and others. Ravine brooms are few. Here and there may be seen *Oplismenus burmanni*, and various ferns.

The rivers and the streams.—These flow in beds of rocks and boulders or sand. Very little water is present except in the Subarnarekha, the Brahmini and other rivers, but here the flow is too rapid for any vegetation to develop. The banks of these rivers show exposed rocks. Here and there some earth may be present in the crevices and in these grow various grasses and weeds.

The salient features of the vegetation of the district.—Singhbhum lies in the Central Indian *sal* tract and everywhere it shows broad leaved trees of which *palas* and *mahua* are the chief. Thorny species are rare, and are seen only on the southern slope of the hills accompanied by the white barked trees with gouty stems and deciduous foliage. On the northern slope and the valleys are seen evergreen trees. *Sal* is present everywhere in a smaller or larger numbers. The plateaux are cleared of the jungles and cultivated. The lower hills and the undulated lands are now being protected and gradually coming under forests, chiefly the immediately useful species being encouraged.

Interesting plants of the district.

The *Gymnosperm*, *Gnetum scandens* is found in this district in the valleys. The stemless palm, *Phoenix acaulis*, though seen elsewhere also on the Chotanagpur and Palamau plateaux is abundant. Especially in the area south of Tatanagar, *Cassytha filliformis*, the green thread like parasite, several species of loranthus and several epiphytic orchids are seen here. The white barked gouty stemmed trees of *Sterculia urens* and *Boswellia serrata* are very conspicuous against the background of the black rocks.

CLIMATE.

The year may be divided into three seasons; the cold season from November to February, the hot season from March to May and the rainy season from June to October.

In the cold season, the early mornings and nights are cold, making huge camp fires most enjoyable. The thermometer touches a minimum of 39°F. or lower. Hoar-frost may be seen in the valleys but little or no fog and mist occur in the district during winter. This season is very delightful, the nights being invariably cool and the air invigorating and exhilarating.

It is unpleasantly hot in the summer season with the hot westerly winds prevailing. On account of the barrier of hills in the south-east no sea breeze can penetrate and the atmosphere is generally dry. Very low values of humidity of the order of 15 per cent or lower may not be uncommon in these months during the afternoon. Even during the hot weather, the air being dry has not the same exhausting effect as the heat near the coast.

During the period February to June violent storms from north-west, called nor'wester, accompanied by thunder, lightning, rain and sometimes hail occur occasionally. During a nor'wester wind speed of 100 miles per hour at Jamshedpur is on record.

In the rainy season the rainfall is highest in the months of July and August. As the rains are not accompanied by the gloomy sky and unceasing torrents which fall in the plains of India, the landscape is pleasingly chequered by passing showers, and the tender foliage of the forests glistens alternately with golden breaks of sunshine or mellowed shades of green.

Rainfall.

The district has fourteen rain recording stations most of them having records extending over forty years. The normal monthly and annual rainfall of each of the rain gauge stations is given in table 1 at the end of this chapter. The normal rainfall in

each month as percentage of the annual along with the number of rainy days is also included in the table. These normals are based on data up to 1940.

The annual average rainfall of the district is 56 inches. The central belt of the district receives 50 inches to 55 inches and the rest of the area more than 55 inches. Some places in the western hilly area record more than 60 inches.

The main rainy months are May to October. Rainfall over 1 inch is also received in February and April. The south-west monsoon sets in, in the middle of June and withdraws by about the middle of October. In the months June to September, the district receives 30 per cent or more of the annual rainfall. July is the rainiest month in the district.

The rainfall of any place measured over consecutive years shows considerable variation from year to year. The distribution of annual rainfall of the district based on data for the years 1901 to 1950 is as shown below:—

Range	Frequency.
35.01—40.00	1
40.01—45.00	2
45.01—50.00	12
50.01—55.00	6
55.01—60.00	14
60.01—65.00	9
65.01—70.00	5
70.01—75.00	1

The average annual rainfall of the district based on these 50 years' data is 55.95 inches and differs slightly by 0.66 inch from the average in table 1, which is based on all data ending with 1940. The standard deviation is 7.8 inches and the co-efficient of variability 14 per cent. The average for the decades are—

Period.	Mean.	Difference from long period mean.	Decade mean as percentage of average.
1901—1910	56.10	0.15	100.3
1911—1920	53.40	—2.55	95.4
1921—1930	56.85	0.90	101.6
1931—1940	53.71	—2.24	96.0
1941—1950	59.66	3.71	106.6
1901—1950	55.95		

The lowest annual rainfall during the 50-year period was 39.32 inches in 1935 (70 per cent of average) and the highest 71.19 inches in 1929 (127 per cent of average) giving a range of 57 per cent of the average.

There have been 13 years when rainfall was less than 90 per cent of the average and 2 years only when it was less than 75 per cent of average. On 27 (54 per cent) occasions rainfall was above the average. There was no sequence of even two consecutive years when the district average annual rainfall was less than 75 per cent.

Table 2 gives the frequency distribution of annual rainfall of the individual stations together with means, extremes and variabilities based on available data from 1901 to 1950. The co-efficeint of variability is a measure of the variation and uncertainty in rainfall. The greater the co-efficient of variability the greater is the variation in rainfall. It is about 20 per cent in the central parts of the district and 15 per cent to 20 per cent elsewhere.

The highest annual rainfall recorded at the individual stations has varied from 135 per cent to 165 per cent of the average. The lowest recorded has varied from 55 per cent to 75 per cent.

According to general practice, annual rainfall within 10 per cent of the average is termed normal and 11 per cent to 25 per cent in slight excess or defect according to sign. Table 3 indicates for each of the rain gauge stations two or more consecutive years when the annual rainfall was below 90 per cent of the average and below 75 per cent of the average.

TEMPERATURE.

Temperature data are available only for two stations, Chaibasa and Jamshedpur, in the district. These are given in table 4.

December and January are the coldest months of the year. The lowest temperature in the district recorded is 39° F. to 40° F. Temperature begins to rise towards the end of February. April and May are the hottest months of the year. The highest temperature recorded was 116° F. at Chaibasa and 117° F. at Jamshedpur.

With the onset of monsoon in the second week of June the temperature begins to fall till August. September is slightly hotter than August. However, the mean temperature begins to fall from the middle of September and winter sets in by about the last week of October.

The district is characterised by large diurnal variation in the winter and summer months. In these months the highest daily range is about 40°F. The variation is least in the monsoon months.

Relative Humidity.

The monthly and annual means of dry and wet bulb temperatures, relative humidity and vapour pressure at Chaibasa and Jamshedpur are given in table 5.

The summer months March, April and May are the driest in the year.

Cloudiness.

The mean cloudiness (in tenths) of the sky covered, is given in table 6. During the months November to April cloudiness is less than five-tenths of the sky. In the monsoon months the days are generally cloudy and nearly overcast condition prevails in the evenings.

Surface winds.

Table 7 gives the percentage number of days of wind from different directions at Chaibasa and Jamshedpur.

Winds are mainly westerly or calm throughout the year except that in Jamshedpur area about 20 to 30 per cent of the winds are easterly in the months May to September.

The table 8 gives the number of days with wind lying in various speed ranges in miles per hour and the mean wind speed for Chaibasa and Jamshedpur based on data from 1936 to 1940.

Winds in Jamshedpur area are generally stronger than those in Chaibasa area. A general feature is that the winds are very light in winter. At the time of a nor'wester in the region, during February to June, winds of gale force or more are not uncommon.

Thunderstorms, squalls, etc.

The table 9 gives the frequencies of occurrence of weather phenomena like thunder, hail, dust storms, squalls and fog at Chaibasa and Jamshedpur*.

*Data through the courtesy of the Metereological Department of India, Poona. (P. C. R. C.).

TABLE 1.*

Normal rainfall n inches monthly percentage of the annual and average number of rainy days.

Station.		Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual.
1		2	3	4	5	6	7	8	9	10	11	12	13	14
Chaibasa	(a)	0.64	1.49	0.87	1.06	2.74	7.79	13.11	12.24	7.91	2.93	0.70	0.18	
	(b)	1.2	2.9	1.7	2.1	5.3	15.1	25.4	23.7	15.3	5.7	1.4	0.3	51.66
	(c)	1.4	2.5	1.7	2.2	5.2	10.7	16.2	16.6	11.6	4.4	1.0	0.4	
Chakradharpur	(a)	0.68	1.36	0.74	0.88	2 83	8.63	13.56	12.36	7.91	2.71	0.67	0.18	73.9
	(b)	1.3	2.6	1.4	1.7	5.4	16.4	25.8	23.5	15.1	5.2	1.3	0.3	52.51
	(c)	1.3	2.3	1.6	2.0	4.8	11.3	15.6	16.7	11.8	4.1	1.0	0.4	
Ghatsila	(a)	0.64	1.27	0.93	1.18	3·50	9.33	13.63	13.90	8.60	3.07	0.60	0.21	72.9
	(b)	1·1	2.2	1.6	2·1	6.2	16.4	24·0	24.4	15.1	5.4	1.1	0.4	56.86
	(c)	1·3	2.2	1.9	2.3	5.6	11.7	16.8	17.1	11.1	4.5	1.0	0.4	
Baharagora	(a)	0.44	1.21	1.13	1.55	3.57	9.53	12.53	12.19	9.13	3.48	0.55	0.22	75.9
	(b)	0.8	2.2	1.0	2.8	6.4	17.2	22.6	22.0	16.4	6.3	1.0	0.4	55.53
	(c)	0·9	1.9	2.0	2.5	5.7	11.6	15.0	16.0	11·5	4.8	0.9	0.3	
Gailkera	(a)	0.69	1.45	0.86	0.81	2.05	9.39	18·31	16.68	8.67	3.47	0.49	0·23	73.1
	(b)	1.1	2.3	1.4	1.3	3.2	14.9	29.0	26.4	13.7	5.5	0·8	0.4	63.10
	(c)	1.3	2.1	1.6	1.8	3.5	11.4	18.3	18.9	11.9	3.9	0.8	0.4	75.9

Manoharpur	(a)	0.71	1.44	0.82	0.83	1.71	9.15	18.91	16.50	7.94	2.51	0.48	0.22	61.12
	(b)	1.2	2.4	1.3	1.4	2.8	15.0	30.8	27.0	13.0	4.1	0.8	0.4	
	(c)	1·2	2.5	1.4	1.6	3.8	10.8	18.8	18.9	10.5	3.8	0.9	0.3	74.5
Katbari	(a)	1.01	1.70	0.97	1.32	2.97	8.51	14.31	12·14	7.92	2.68	0.56	0.26	54.35
	(b)	2.0	3.1	1.8	2.4	5.5	15.7	26.3	22.3	14.6	4.9	1.0	0.5	
	(c)	1.6	2.3	1.7	2.5	4.7	9.8	14.3	13.5	10.0	4.0	0.8	0.3	65.5
Jagannathpur	(a)	0.82	1.38	0.94	0.87	2.60	8.22	14.27	12.84	7.47	2.83	0.54	0.16	52.94
	(b)	1.5	2.6	1.8	1.6	4.9	15.5	26.9	24.3	14.1	5.3	1.0	0.3	
	(c)	1.6	2.0	1.9	1.8	4.6	11.9	16.7	16.3	11.2	4.1	1.1	0.3	73.5
Sonua	(a)	0.38	1.53	0.82	0.54	2·42	8.14	16.26	13.73	7.59	2.96	0.43	0.11	54.91
	(b)	0.7	2.8	1.5	1.0	4.4	14.8	29.6	25.0	13.8	5.4	0.8	0.2	
	(c)	1.1	3.2	1.5	1.6	4.4	11.8	19.0	18.2	11.7	4.5	0.8	0.2	78.0
Kharsawan	(a)	0.73	1.31	0.70	0.77	2·38	8.61	13.33	13.71	8.21	2.83	0.39	0.22	53.19
	(b)	1.4	2.5	1.3	1.4	4.5	16.2	25.1	25.8	15·4	5.3	0.7	0.4	
	(c)	1.3	2.2	1.5	1.7	4.0	10.2	15.8	16.6	10.5	3.7	0.5	0.3	68.3
Seraikela	(a)	0.68	1.43	0.79	0.78	2.42	7.70	12.88	12.78	7.35	2.79	0.53	0.22	50.35
	(b)	1.4	2.8	1.6	1.5	4.8	15.3	25.6	25.4	14.6	5.5	1.1	0.4	
	(c)	1.4	2.1	1.5	1.8	3.5	10.3	15.4	15.6	10.2	4.2	0.7	0.4	67.1

* For the description of the tables please see pages 20—21 (P. C. R. C.).

TABLE 1—*concld.*

Station.		Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual.
1		2	3	4	5	6	7	8	9	10	11	12	13	14
Jamshedpur	(a)	0.36	1.95	0.72	0.90	3.13	7.51	13.16	15.41	7.11	2.66	0.37	0.23	53.51
	(b)	0.7	3.6	1.3	1.7	5.8	14.0	24.6	28.8	13.3	5.0	0.7	0.4	
	(c)	0.9	3.7	2.0	2.1	5.1	10.7	17.4	18.0	11.2	4.2	0.7	0.4	76.4
Majhgaon	(a)	0.54	1.45	1 03	0.93	2.96	7.63	19.23	13.72	7.46	2.84	0.88	0.21	58.93
	(b)	0.9	2·5	1.8	1.6	5.0	12.9	32.6	23.3	12.7	4.8	1.5	0.4	
	(c)	1.3	2.5	1.9	1.9	5.0	10.3	18.4	16.3	10.4	5.0	1.5	0.5	75.0
Singhbhum Dist.	(a)	0.64	1.46	0.87	0.96	2.71	8.47	14.88	13.71	7.94	2.90	0.55	0.20	55.29
	(b)	1.2	2.6	1.6	1.7	4.9	15.3	26.9	24.8	14.4	5.2	1.0	0.4	
	(c)	1.3	2.4	1.7	2.0	4.6	11.0	16.7	16.8	11.0	4.2	0.9	0.4	73.0

(*a*) Normal rainfall in inches.

(*b*) Monthly rainfall as percentage of annual.

(*c*) Average number of rainy days.

TABLE 2.

Interval (inches).	Chaibasa.	Chakradharpur.	Ghatsila.	Baharagora.	Gailkera.	Manoharpur.	Katbari.	Jagannathpur.	Sonua.	Kharsawan.	Seraikela.	Jamshedpur.	Majhgaon.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
30.01—35 ..	1	2	..	..	..	..1	..	..	..	3	2	..	..
35.01—40 ..	6	1	3	2	2	1	..	3	..	4	4	..	..
40.01—45 ..	7	2	1	5	1	1	4	6	2	6	5	2	2
45.01—50 ..	11	6	7	5	2		5	6	2	5	12	4	2
50.01—55 ..	8	16	10	8	5	5	7	10	5	3	5	9	5
55.01—60 ..	6	4	7	7	5	11	10	3	3	11	7	2	6
60.01—65 ..	5	8	9	9	9	8	6	7	4	10	3	7	4
65.01—70 ..	4	3	6	3	4	7	3	6	2	3	4	2	2
70.01—75 ..	1	1	1	1	8	7	4	1	1	1	..	1	4
75.01—80 ..	..	2	1	2	2	2	..	1	..	1	..	1	..
80.01—85 ..	..	..	..	1	..	..	1	..	..	1	1	..	1
85.01—90 ..	..	..	1	..	..	1	..	..	..	..	..	..	..
90.01—95 ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mean	50.75	54.74	56.86	56.40	63.35	62.64	57.69	54.42	56.30	53.52	51.13	56.91	59.51
Highest	71.26	77.59	87.43	82.73	104.01	89.47	82.60	75.13	69.83	80.80	82.31	75.29	82.71
Year	1929	1942	1926	1946	1929	1920	1946	1933	1936	1941	1941	1929	1946
Percentage of mean	140.4	141.7	153.8	146.7	164.2	142.8	143.2	138.1	124.0	151.0	161.0	132.3	139.0
Lowest	31.27	32.62	37.20	37.83	37.02	38.31	40.68	35.03	41.90	30.80	30.60	42.00	43.65
Year	1915	1915	1902	1938	1915	1924	1925	1935	1945	1925	1935	1944	1935
Percentage of mean	61.6	59.6	65.5	67.1	58.4	61.2	70.5	64.4	74.4	57.5	59.8	73.8	73.3
Standard Deviation	9.71	9.70	10.15	10.73	13.55	9.89	9.74	9.94	8.55	11.45	10.53	8.60	9.76
Co-efficient of variability(%	19.1	17.7	17.9	19.0	21.4	15.8	16.9	18.3	15.2	21.4	20.6	15.1	16.4
Percentage of rainfall in monsoon months June to September.	79	81	80	78	84	86	79	81	83	83	81	81	81

TABLE 3.

Mano-har-pur.	Gailkera.	Sonua.	Chakra-dharpur.	Kharsa-wan.	Jagannath-pur.	Chaibasa.	Seraikela.	Majhga-on.	Katbari.	Jamshed-pur.	Ghataila.	Baharago-ra.
1	2	3	4	5	6	7	8	9	10	11	12	13
Less than 90% of the average.												
Nil	1904-05 1947-49	1934-35	1907-08 1934-35	1921-22 1934-36	1914-16	1915-16 1924-25 1934-35 1945-49	1910-11 1915-16 1934-35 1944-45	1934-35	1901-02 1910-11 1924-25	1924-25 1934-36	1902-03 1934-35	1920-21 1923-24 1934-35
Less than 75% of the average.												
Nil	1934-35	Nil	1915-16	1924-25 1944-45	1918-19	Nil	Nil	Nil	Nil	Nil	Nil	

TABLE 4.*

Temperature data.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
CHAIBASA °F													
Mean daily Max. Temp.	79.2	83.8	94.2	102.1	104.0	96.9	89.4	88.3	89.3	88.2	82.9	78.2	89.7
Mean daily Min. Temp.	52.4	57.4	65.8	74.7	79.2	79.2	77.5	76.9	76.0	70.1	59.7	51.6	68.4
Mean. Temp.	65.8	70.6	80.0	88.4	91.6	88.1	83.5	82.6	82.7	79.1	71.3	64.9	79.1
Mean Range	26.8	26.4	28.4	27.4	24.8	17.7	11.9	11.4	13.3	18.1	23.2	26.6	21.3
Highest Maximum	92	99	108	113	116	115	106	99	96	97	93	88	116
Lowest Minimum	40	44	53	60	65	68	71	70	70	57	46	41	40
Absolute Range	52	55	55	53	51	47	35	29	26	40	47	47	76
JAMSHEDPUR °F.													
Mean daily Max. Temp.	80.4	83.3	94.0	102.0	102.9	97.0	89.3	88.9	89.9	89.7	85.0	79.8	90.2
Mean daily Min. Temp.	51.3	57.7	64.8	73.8	79.2	80.0	78.6	78.0	77.6	71.1	59.0	51.5	68.5
Mean Temp.	65.9	70.5	79.4	87.9	91.1	88.5	83.9	83.5	83.7	80.4	72.0	65.7	79.8
Mean Range	29.1	25.6	29.2	28.2	23.7	17.0	10.7	10.9	12.3	18.6	26.0	28.3	21.7
Highest Maximum	91	96	107	112	115	117	99	97	97	97	92	88	117
Lowest Minimum	39	41	52	61	67	71	71	71	71	57	43	41	39
Absolute Range	58	55	55	51	48	46	28	26	26	40	49	47	78

* The means are based on data for the years 1911—1940 for Chaibasa and 1931—1940 for Jamshedpur and extremes on data up to 1950.

TABLE 5.

—	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
CHAIBASA.													
Dry Bulb Temperature °F.													
8 hrs.	58.5	63.7	73.8	83.2	86.5	84.5	81.1	80.4	80.6	76.4	66.7	58.2	74.5
17 hrs.	75.6	79.4	90.4	98.6	95.5	88.1	83.6	83.2	83.4	82.5	77.8	72.8	84.2
Wet Bulb Temperature °F.													
8 hrs.	55.1	59.0	65.2	72.1	76.7	77.7	77.4	77.3	76.9	71.9	62.3	54.8	68.9
17 hrs.	64·2	67.0	73.9	71.5	74.9	78.6	78.9	78.7	77.9	74.6	67.4	63.2	72.6
Relative Humidity (%)													
8 hrs.	79	74	61	56	62	72	84	86	84	79	77	79	74
17 hrs.	52	51	45	24	38	68	81	82	79	69	57	56	58
Vapour Pressure in mbs.													
8 hrs.	13.1	14.7	16.9	21.0	26.0	28.6	30.1	30.0	29.5	24.4	17.2	13.2	22.1
17 hrs.	15.3	17.0	21.3	13.7	19.5	28.7	31.6	31.2	30.0	25.4	18.1	15.4	22.4
JAMSHEDPUR.													
Dry Bulb Temperature °F.													
8 hrs.	57.8	64.0	74.2	83.7	87.1	86.4	81.8	81.4	81.5	77.2	66.9	58.7	75.0
Wet Bulb Temperature °F.													
8 hrs.	54·0	59.5	64.1	70.5	76.9	78.8	78.0	78.0	77.8	72.4	61.9	55.0	68.9
Relative Humidity (%)													
8 hrs.	77	75	55	49	61	73	84	85	84	78	74	78	73
Vapour Pressure in mbs.													
8 hrs.	12.5	14.8	15.4	18.8	26.3	29.8	31.0	30.7	30.4	24.5	16.3	12.8	22.0

TABLE 6.

—	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
					CHAIBASA								
All clouds													
8 hrs.	2.5	2.6	2.1	2.3	3.1	6.4	8.1	8.0	6.4	3.5	2.5	1.9	4.1
17 hrs.	3.0	3.8	3.7	4.9	7.2	9.1	9.7	9.7	8.8	5.5	4.2	2.4	6.0
Low clouds													
8 hrs.	1.8	3.1	2.0	1.9	2.8	6.0	8.9	7.5	5.7	3.5	2.0	1.4	3.9
17 hrs.	1.6	3.3	3.1	3.5	5.4	7.2	8.2	8.1	7.3	4.2	1.0	1.2	4.6
					JAMSHEDPUR.								
All clouds													
8 hrs.	2.4	2.9	2.2	2.2	3.5	6.8	8.9	8.6	7.1	3.9	2.7	2.0	4.4
Low clouds													
8 hrs.	0.9	1.8	0.8	1.1	1.8	3.3	6.2	4.7	5.0	3.1	0.5	0.8	2.5

TABLE 7.

—		Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual.
1		2	3	4	5	6	7	8	9	10	11	12	13	14
							CHAIBASA.							
N	I	1	1	1	1	1	0	1	1	1	2	2	1	1
	II	4	11	7	13	8	5	1	3	3	5	0	2	5
NE	I	2	2	3	2	3	5	6	8	7	6	4	1	4
	II	8	11	6	7	14	8	7	5	6	10	6	7	8
E	I	1	1	2	1	2	4	3	6	5	3	2	1	3
	II	4	3	3	1	8	7	6	4	6	3	0	0	4
SE	I	1	1	1	1	3	2	2	2	1	0	1	0	1
	II	1	1	0	1	14	7	4	10	3	2	0	0	4
S	I	3	3	4	9	9	5	4	3	3	2	3	4	4
	II	1	4	5	8	10	11	6	5	7	3	1	1	5
SW	I	23	26	28	30	34	31	31	28	20	15	13	22	25
	II	4	15	20	15	10	21	23	17	10	1	1	4	12
W	I	7	9	8	9	9	11	12	9	7	6	8	7	9
	II	6	15	25	17	8	17	18	16	11	1	3	4	12
NW	I	2	2	2	1	1	3	1	1	2	1	1	0	1
	II	4	6	15	15	11	5	8	1	2	1	1	1	0
Calm	I	60	56	52	46	38	39	40	42	53	64	67	64	52
	II	68	35	19	24	17	19	26	39	52	74	88	81	44

JAMSHEDPUR.

N	I	1	1	1	1	1	1	1	1	0	1	0	0	1
NE	I	1	1	1	0	1	8	4	3	4	5	2	1	2
E	I	5	6	5	3	21	18	17	20	11	11	4	2	10
SE	I	3	3	3	1	14	8	5	7	4	3	1	1	4
S	I	0	3	1	0	1	4	1	1	1	0	0	1	1
SW	I	0	3	5	9	6	16	21	17	14	2	4	2	8
W	I	26	28	29	35	26	29	26	28	35	23	33	28	29
NW	I	12	14	18	29	9	5	5	5	7	15	19	15	13
Calm	I	52	41	39	23	23	16	21	18	24	40	36	51	32

I—8 hrs.   II—17 hrs.

TABLE 8.

No. of days with wind force.		Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual.
1		2	3	4	5	6	7	8	9	10	11	12	13	14
CHAIBASA.														
Over 33 m. p. h.	I	0	0	0	0	0	0	0	0	0	0	0	0	0
	II	0	0	0	0	0	0	0	0	0	0	0	0	0
12—33 m. p. h.	I	0	0	0	0	0	0	0	0	0	0	0	0	0
	II	0	0	1	1	2	1	0	1	0	0	0	0	6
2—11 m.p. h.	I	18	19	21	21	32	24	24	22	17	14	19	16	237
	II	10	18	24	22	24	23	23	18	15	8	4	6	195
Calm	I	13	9	10	9	9	6	7	0	13	17	11	15	128
	II	21	10	6	7	5	6	8	12	15	23	26	25	164
Mean wind speed in m. p. h.		1.3	1.6	2.0	2.5	2.6	2.7	2.5	2.1	1.6	1.2	1.2	1.1	1.9
JAMSHEDPUR.														
Over 33 m. p. h.	I	0	0	0	0	0	0	0	0	0	0	0	0	0
12—33 m. p. h.	I	0	1	0	0	1	2	1	1	1	1	0	0	8
2—11 m. p. h.	I	15	16	19	23	23	23	24	24	22	18	19	15	241
Calm	I	16	11	12	7	7	5	6	6	7	12	11	16	116
Mean wind speed in m. p. h.		1.5	2.3	2.7	3.3	4.2	4.6	4.2	4.0	3.1	2.1	1.6	1.5	2.9

I—8 hrs. I. S. T. II—17 hrs. I. S. T.

TABLE 9.

—	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
CHAIBASA.													
Thunder	1.1	3	3	4	10	13	10	11	12	4	0.1	0	71
Hail	0	0	0	0	0.1	0	0	0	0	0	0	0	0.1
Duststorm	0	0	0	0.4	0.5	0	0	0	0	0	0	0	0.9
Squall	0	0.5	0.7	0.4	1.4	0.6	0	0.2	0	0	0	0	4
Fog	0.1	0.4	0	0	0	0	0	0	0	0	0.4	0	0.9
JAMSHEDPUR.													
Thunder	1.0	3	3	6	8	12	9	11	11	5	0.1	0.1	6.9
Hail	0	0.1	0.2	0	0.5	0	0	0	0	0	0	0	0.8
Duststorm	0	0.2	0.9	1.6	4	2	0	0	0	0	0	0.1	9
Squall	0.2	0.2	0.2	0.8	1.7	0.9	0.4	0.6	0.5	0.2	0	0	6
Fog	0.2	0.9	0	0	0	0	0	0	0	0	0.1	0.7	1.9

CHAPTER II

GEOLOGY AND MINERAL RESOURCES.

General Geological Features.

Of all the geological formations which occur in the district the following three are the most important : (*a*) granites and gneisses of Archaean age intrusive into the oldest sedimentary rocks, now highly metamorphosed, and known as the Singhbhum granite and gneiss, the Chotanagpur granite-gneiss, and the Chakradharpur and Akarsani granophyric granite-gneiss; (*b*) the Iron-ore Series which are mostly metamorphosed, ancient sediments with contemporaneous basic igneous rocks and are equivalent to a large part of the Dharwar System of Indian Geology, and (*c*) the volcanic lava flows of the Dalma hill and its adjoining ranges.

The greater part of the district is covered with rocks of the Iron-ore Series and granitic rocks occur in the south-east over a considerable area and along a small patch north of Chakradharpur. The plains of Singhbhum are partly on granite and partly on the schist and shales of the Iron-ore Series. The shales, which mostly form the central and southern parts of the Singhbhum plains, merge into the hills of the Kolhan in the south and into those of Porahat to the west. Towards the west they gradually change to phyllites, and towards the north to mica-schists which extend to the Tamar plain of the Ranchi district. The mica-schists form low ridges and undulating hills in the west in Porahat. A series of shale and quartzite hills extend into the Singhbhum plains to the south-east of Chakradharpur and connect the southern outcrops of the Iron-ore Series with the outcrops in the north.

The Akarsani granite-gneiss forms a prominent hill across the mica-schist plains to the east of Kharsawan village.

The third most important formation is the series of basic lava flows known as the Dalma volcanic flows after the prominent hill mass of Dalma north of Jamshedpur. The lavas form precipitous hills and ranges extending for over 100 miles.

South of the Subarnarekha in Dhalbhum, lava flows cap the Dhanjori range and other hill ranges adjoining Mayurbhanj. Here the plains are formed either by the Iron-ore Series of rocks or by a soda rich variety of granite.

In the Kolhan area of South Singhbhum, the Iron-ore Series of rocks reach their maximum development and the rich banded haematite-quartzite rocks of this series are the most important source of the iron-ores on which India's iron and steel industry is based. The prominent Angarbira Hill, south-west of Chaibasa, is made of basic lava flows of Dalma age.

Here and there are younger dykes and older inclusions of ultrabasic igneous rocks belonging to the peridotite family. The most important among these which have intruded the Iron-ore Series of rocks as small laccoliths have given rise to the chromite deposits of Jojohatu, some 10 miles west-south-west of Chaibasa, and others occurring in the granite-gneiss have yielded the asbestos deposits of Seraikela and Dhalbhum.

These older rock formations are overlain by a younger series of unmetamorphosed rocks consisting of conglomerates, sandstones and limestones in the Kolhan basin from Chaibasa southwards. They are known as the Kolhan Series in Indian Geology and are considered to be of the same age as the Cuddapah System of South India. Lastly, the granitic rocks are cut by a remarkable system of reticulating dykes of dolerite which form characteristic elongated ridges marked by rounded boulders of a dark rock. This dolerite has been named Newer Dolerite owing to its younger age. Their age is uncertain but they may be of Cuddapah age since dykes of younger age than the Dharwar and older than the Deccan lavas occur associated with the Cuddapah rocks of South India which are younger than the Dharwar System.

STRUCTURAL FEATURES.

The most important structural feature of the geology of the district is a series of great anticlines and synclines which veer round from west-east to north-west-south-east in the northern part of the district. A series of highly metamorphosed rocks form a great geoanticline which commencing from the east in North Singhbhum extend through Seraikela, turning south-east near Jamshedpur. It thus forms a great curve in the north-eastern part of the district which turns southwards near the Mayurbhanj border. North-west of Kharsawan, a north-westerly branch of the anticline forms an almost closed dome known as the Sonapet anticline.

Another remarkable structural feature is a great shear zone which has formed along the overfolded southern limb of the geoanticline as a zone of overthrust. This shear zone follows the same trend as the latter. From west to east trend in the western part of the district in the north, it takes a decided turn to the south-east along the north-east foot of the hills of the Dhanjori range through Rakha Mines and Badia. It then cuts across the Dhanjori quartzite farther south-east and disappears in the schists towards Singpura (22°22′ N. 86°35′ E.). Along this thrust zone the rocks have been highly sheared and even granites have been mylonitised.

This zone almost bisects the rocks of Singhbhum and forms a broad arc convex towards the north as it again swings to a

west-south-west—east-north-east trend in the Kolhan. Its westerly section is marked by the valley of the Sanjai and the railway line.

It would thus appear that the Iron-ore Series of sedimentary rocks were folded into well defined anticlines and synclines overfolded towards the south, and formed a great mountain range, extending east to west across North Singhbhum and South Ranchi to North Dhalbhum. South of this main axis of folding, earth movements were less intense and the rocks of Central and South Singhbhum are generally less metamorphosed than those of North Singhbhum.

The rocks of the Iron-ore Series show a rapid change in the degree of metamorphism across the strike from phyllites to mica-schist and a similar but gradual change towards the west along the strike. Tongues of soda-granite and granophyre have been injected along the zone of thrusts east and west of Chakradharpur, Seraikela and Musabani. The shearing movements must have continued from the post iron-ore stage to the end of the period of granitic injections, since the granitic rocks have been sheared into sericite-quartz schist and felspathic schists.

The shear planes have been the main structural features which have controlled the localisation of the ore-bearing fluids. The copper belt, for its most part, follows this zone of overthrust. The apatite-magnetite veins and the copper lodes are genetically related to the soda-granite and granophyre which were intruded along the copper belt.

The shear zone in other places consist of epidiorites which are often completely altered to chlorite-schists and talc-schists; phyllites, mica-schists, quartzites and conglomerates.

North of the geoanticline there is a large geosyncline of volcanic rocks known as the Dalma lavas. The northern end of this geosyncline has been overfolded, and in places been overthrust, by the rocks to the north which form part of another geoanticline which extend across the southern parts of the Ranchi and former Manbhum districts.

South Singhbhum.

The sequence of beds in the Iron-ore Series in the Kolhan area is yet conjectural. The banded haematite-quartzites crop out as ridges, the most important of which are arranged in the form of a narrow horse-shoe open to the north and closed to the south in Keonjhar and Bonai. The ridge forming the western side of this horse-shoe is known as the Iron-ore range. It extends for nearly 30 miles. The main basin of deposition of the younger Kolhan Series lies across the northern end of the eastern side of the horse-shoe. The Noamundi mine is at the northern end of

the eastern rim. There is a wide area of lavas with an occasional thin zone of phyllites intervening between them and the banded haematite-quartzite. On the western side of the horse-shoe also there is a wide area of lavas with a zone of phyllites between them and the haematite-quartzite. The lavas on the east side and the west side continue round the southern closed end of the horse-shoe. The area inside the horse-shoe also consists of phyllites with tuffs, lavas and some cherts, and occasional outliers of Kolhan rocks. All the formations dip persistently to the north-west. The lava, therefore, overlies the banded haematite-quartzite on the western margin of the horse-shoe, and underlies it on the eastern margin. It is not clear from the field work so far done as to whether this horse-shoe represents a geosyncline pitching to the north or a geoanticline pitching to the south. In the former case the sequence along the eastern rim with lavas at the bottom is the normal one and the sequence at the western limb is inverted due to overfolding. If, on the other hand, the structure is that of a geoanticline, the eastern limb is overfolded and the sequence on the western limb with lavas at the top is the normal one. The lavas are then comparable in stratigraphic sequence to the Dalma lavas. Petrographically the two lavas are similar.

The lavas on the east side of the horse-shoe consist of a number of flows with a bedded appearance and amygdaloidal lava. The lava is haematitised in many places even to the extent of forming an iron-ore. The lavas had also undergone contemporaneous alteration to sericite-rocks, talc-rocks and clay resembling phyllitic tuffs. The volcanic tuffs vary from coarse fragmental accumulations to fine-grained material. The latter is more common and has been altered to a normal phyllite.

Iron-ore in Phyllites.

The normal phyllites have a slaty cleavage and phyllitic sheen. They have been subjected to close folding. Although they are of a variety of colours, purple, ferruginous phyllites are more common which sometimes pass into an ore with over 60 per cent of iron.

Manganese-ore in Phyllites.

In many places the phyllites are manganiferous and here leaching has given rise to enriched zone of nodular psilomelane and pyrolusite within the phyllites, or to lateritic manganese at the surface with gradations between them. Detrital material from these have also been mined. Between Jamda and Gua, manganese deposits are disposed along at least four north-east, south-west belts. Another association of manganese-ore deposits which yield better-grade ore is with the cherts which are of widespread occurrence in the Iron-ore Series and are associated with the phyllites

and lava in the Kolhan. Red, green and mottled jaspers are also common.

Dolomite and chert occur with manganese deposits south of Nalda and dolomite occurs near Chaibasa.

BANDED HAEMATITE-QUARTZITE.

The banded haematite-quartzite is a very striking rock formation consisting of interbanded layers of iron-oxide and silica. Owing to their great hardness these rocks resist weathering and form steep cliffs with characteristic conspicuous bands of different colours. The Iron-ore range is formed mainly of this rock. It extends for some 30 miles from Gua to Rontha in Bonai with a breadth from 400 to 1,000 feet and rising to 1,500 feet above the surrounding plains. The bands are of varying colours such as grey, brown, black, bright red owing to the nature of the iron-oxide, and are very irregular, crumpled and contorted. They vary in thickness from mere partings to several inches and are commonly quarter-inch thick. The silicious bands are of fine-grained quartz or red jasper. These grade to massive iron-ore.

The iron-oxide is usually haematite, but cubes and octahedra of magnetite and pseudomorphs or haematite after magnetite (martite) also occur. A few crystals of iron-carbonate or siderite also occur sometimes pseudomorphosed by silica. The thickness of the stage is not determinable owing to folding and faulting but is not likely to exceed 1,000 feet. It is very like the jaspilite of the Lake Superior region and can be matched with the pre-Cambrian ores of Venezuela and Brazil. By local replacement caused by circulating waters the interbedded ferruginous shales have been converted to iron-ore to some extent here and there.

The whole of the ore mined is almost entirely haematite (massive steel-grey type) with 69 per cent iron, varying through a porous shaly type produced by the leaching out of the sillicious layers and carrying 60 per cent iron, to a fine soft powder with up to 69 per cent of iron. The reserves of 60 per cent or more ore in Singhbhum are estimated at 14,70,00,000 tons within 200 feet from the surface. Recent estimates made by Percival amount to more than double this figure.

ORIGIN.

The formation of the iron-ore beds is, according to Dunn, due to the oxidation of the land surface during breaks in the deposition of the Iron-ore Series of strata accompanied by thermal activity. It was a period of volcanism and widespread thermal activity. The oxidised surface products of highly ferruginous rocks were, along with silica, deposited in large lakes, or, silicification of finely-banded oxidised ferruginous sediments took place

in situ giving rise to the zone of banded haematite-quartzites. Iron and silica have been re-arranged by circulating water in later time giving rise to deposits of massive ore.

Spencer and Percival do not agree with the silicification theory. According, to them iron and silica derived from the weathering of basic (iron-rich) rocks were carried away in solution or in colloidal form and deposited in large inland sea or ocean. Partial oxidation of the iron and any organic matter would reduce the solubility of iron and cause its precipitation as a mixed colloid, from which haematite, magnetite and siderite would derive. It would enclose any small crystals of carbonate or magnetite already formed and held in suspension.

Banding could have been caused by local or general variations in the proportion of iron oxide to silica in the colloidal sediment. There was intermittent supplies of mixed material, with more rapid settlement of the iron than the siliceous colloids.

EASTERN SINGHBHUM.

In eastern Singhbhum the Iron-ore stage consists largely of widespread metamorphosed basic igneous rocks, both extrusive and intrusive, in the south, while phyllites predominate in the north. Other rocks are mica-schists, tuffs, banded haematite-quartzites, carbon-quartzites, etc. The strike of the beds is north-west-south-east, but the structure is obscured by intrusive granite. The basic igneous rocks are generally altered to epidiorite.

The phyllites are sericitic but ferruginous and chloritic types occur. They are sometimes oxidised to haematite rock along the contact with the overlying Dhanjori rock. In many places the phyllites grade to cherts recrystallised to quartzites. At Kendarkocha quartz veins within the phyllites contain gold.

NORTH OF THE SHEAR ZONE.

North of the shear zone the geoanticline of mica-schists with intercalation of hornblende schists and the geosyncline of Dalma lavas extend for over a hundred and twenty miles from Porahat in the west to Midnapore district in the east. The mica schists together with the hornblende schists and quartz-granulites form the lower stage of the Iron-ore Series and are referred to as the Chaibasa stage. The schists attain their highest grade of metamorphism in the Sonapet anticline, in Kharsawan which is a branch of the main geoanticline and in Seraikela, where they have been turned into garnetiferous gneisses. The typical mica schists contain the two micas, garnet staurolite, sillimanite and tourmaline. There is also a zone of kyanite-quartz-granulite, within bands of phyllitic mica schists, in which the kyanite is segregated in places to a dense, massive, kyanite rock which is

used as a refractory material. The largest deposit of kyanite is at Lapsa buru in Kharsawan. Other rock types are garnetiferous sillimanite-cordierite-gneiss and feather amphibolites, north of Riarda (22°52′ N. : 85°53′ E.) and Ramdih (22°53′ N. : 85°38′ E.).

There is a zone of phyllites, varying to mica schists, north of the geoanticline which forms ridges in Kharsawan and Dhalbhum widening out to the west. They consist of chlorite with magnetite, kyanite, iron-bearing ottrelite and occasional carbonates.

In Dhalbhum on the southern side of the shear zone, there is a group of sandstone-quartzites overlain by lava with conglomerates, which form a triangular ridge and plateau area between Rangamatipahar in the north-west and Bungaburuand Turligaparbat in the south, which has been termed the Dhanjori beds after the Dhanjori range. The northern and north-eastern part of this hilly tract is known as the Dhanjori range. The Dhanjori quartzite is overlain by lava flows which appear most likely to be the equivalents of the Dalma lavas. The thick Dhanjori conglomerate and the unconformity at its base have no equivalent in the Dalma area of the north. The quartzite-conglomerate rests unconformably on an old erosion surface cutting across the phyllites, epidiorites and quartzites of the Iron-ore Series. The lavas rest mainly upon the quartzite, but in some places thin phyllites intervene between them. The lavas are vesicular and amygdaloidal, but are sheared, more particularly in the north and north-north-east in the shear zone, where they have been squeezed into narrow synclines between quartzites. The lava has been metamorphosed to hornblende schist and the conglomerate has been sheared to conglomeratic quartz schist. Veins of copper have formed in this sheared conglomeratic quartz schist at Rakha Mines.

The Dalma lavas extend across the border of North Singhbhum to southern Ranchi and former Manbhum districts. In the eastern part in Dhalbhum, South Manbhum and western Midnapur they have been folded into a great syncline. They cover a large area in the west in Porahat and extend as a narrow belt as far west as Gangpur in Orissa. The flows have been metamorphosed into fine-grained epidiorites varying to hornblende schists, and where sheared pass into talc and chlorite schists. The lavas particularly along the northern side of the Dalma Hill, are amygdaloidal. The region of Dalma was a centre of explosive volcanic activity since a wide belt of agglomerate extends for nearly 20 miles along the southern slope of the Dalma Hill in Dhalbhum and there are three other belts of agglomerates farther west. On Dalma Hill proper they occur from summit to base.

The volcanic flows and sills form precipitous hills extending for over 100 miles and rising to heights over 2,000 feet above

the plains. The folding of the lavas is simple in the east and in the central area, but becomes complex with isoclinal folds in the west. The phyllites below the lavas were gently flexed and slightly denuded prior to the eruption of the lavas and the phyllites.

Between Dhobani and Musabani the lava has been intruded by the Akarsani soda-granite, while veins of copper of still later date have formed in the lava north of Dhobani. The lava has also been altered in places to biotite-chlorite schist which is often tourmaline bearing.

POTSTONE.

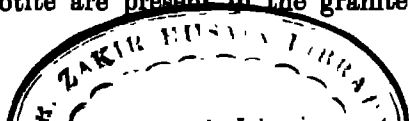
North of Kharsawan and Seraikela, in the region of high grade metamorphism, the phyllites are turned into mica schists with staurolite, kyanite and sometimes andalusite. Black carbonaceous phyllites occur occasionally. Chlorite schists have formed from the alteration of basic igneous rocks. Sometimes they grade to potstone or steatite which is worked locally. Some of the phyllites represent fine tuffs and even volcanic flows.

The rocks above these phyllites corresponding to the iron-ore stage are more metamorphosed here in North Singhbhum compared to South Singhbhum. Haematite-quartz schists are sometimes interbedded with some iron-ore specially in Porahat. Other rock types are quartzites and calc-schists.

GRANITES AND GNEISSES.

There were at least two periods of intrusion of granitic rocks, the one known as the Singhbhum granite and the other as the Akarsani soda-granite.

The Singhbhum granite shows considerable variation in texture, from an extremely fine-grained to a rather coarse-grained and somewhat porphyritic rock with felspar crystals in places up to six inches in diameter. The texture increases in coarseness away from the boundary, muscovite becomes abundant and the rock becomes more acid with increasing coarseness. The plagioclase content is so high that the rock may be classed as an adamellite varying to granite through granodiorite. Near Seraikela town, the granite is sericitised with a banded structure and granulation. It is more basic and may represent an earlier, more basic border phase, and might have absorbed the overlying shales. It is identical with the Chakradharpur granite-gneiss to the west.

In eastern Singhbhum, the granite shows the same diversity in texture. Along the western edge of the hornblende schists and phyllites, the granite is gneissic and banded. Gradations to hornblende granodiorite are common. In the east in Dhalbhum, a soda-orthoclase is present in many specimens. Apatite, sphene, zircon, iron-ores are accessories. Near its contact with the Diorite, minute needles of reddish brown biotite are present in the granite.

AKARSANI GRANOPHYRE.

This rock extends in small, elongated and detached exposures among phyllites and mica schists from Kharsawan towards south of Jamshedpur, east-south-east to Hitku (22°42′ N. : 86°15′ E.), and comes within the shear zone east of Seraikela. A large tongue of granite crops out in the epidiorite south of Surda (22°33′ N. : 86°26′ E.). A smaller granite, more severely crushed than the former, is seen west of Pathargara (22°32′ N. : 86°27′E.). The rock is highly mineralised with the formation of apatite veins which form a source of phosphates and altered to biotite or chlorite schists. Around Musabani and Badia the granite is more massive and has permitted the formation of clear cut lodes of copper ores. From Bakra (22°29′ N. : 86°29′ E.) the granite again is sheared and mineralised with apatite veins.

The Chakradharpur granite is probably a part of this Akarsani granophyre. The rock is non-foliated, coarse-grained and porphyritic with a fine granophyric intergrowth of felspar and quartz. In the shear zone large tongues of this granite which have intimately penetrated the schists have been sheared into felspathic and muscovite-quartz-schists.

CHOTANAGPUR GNEISS.

The particular gneiss designated by the above name is found in a small area in the Singhbhum district. It occupies large areas in Peninsular India, Madhya Pradesh and in other parts of Chotanagpur. In the Singhbhum district it crops out in the north-eastern corner. It contains large inclusions of schists derived from the Iron-ore Series. The mica and hornblende schist inclusions are usually arranged in the direction of foliation of the gneissic rocks and have given rise to banded rocks. The original granite was a medium-grained rock at times porphyritic with large microcline phenocrysts. The gneiss is finely-banded with alternate linear arrangement of the ferro-magnesion and colourless minerals. The chief constituents are quartz, orthoclase and microcline with some oligoclase, abundant yellowish green biotite and occasional blue-green hornblende with accessory apatite, zircon, sphene, rutile and magnetite. Micropegmatitic structures so common in the granophyre are rare. In East Singhbhum fine-grained aplitic types occur which generally intrude the coarse granite.

GIRGA GNEISS.

In the Girga Reserved Forest, 15 miles west of the Chakradharpur gneiss outcrop, is a small granite mass related to the Chotanagpur gneiss. It has abundant inclusions of mica and hornblende schists and has injected the mica schist in lit-par-lit manner.

APLITE, PEGMATITE AND QUARTZ VEINS.

Pegmatite and aplite veins occur throughout the metamorphic rocks particularly in the vicinity of the main granite masses. Numerous quartz veins of different ages occur in the schistose rocks of the Singhbhum and the adjoining districts and in the younger Kolhan phyllitic shales. There are two principal types of veins. In one, which is regarded as older, the veins are ferruginous and disintegrate more readily. They have little continuity and are indicated by scattered patches of translucent, blue or dark-grey quartz. The other type of vein is continuous and comparatively undisturbed, and is pure white and opaque. They are sometimes very wide.

Both the types of vein carry gold, but the blue or grey type is more important. According to Dunn the veins which are restricted to the zone of schists lying directly beneath the Dalma lava flows are gold bearing. Gold has been found in these veins at Kundarkocha, Sonapet, Sausal and Pahardiah. Some of the cross veins carry argentiferous galena. A small vein of wolframite has been mined near Tatanagar. Veins of barytes occur in the sericite schists about half a mile to the south-west of Kolpotka (22°22′ N. : 85°06′ E.) in Singhbhum close to the Gangpur border.

ULTRABASIC INTRUSIVES.

The ultrabasic intrusives of Singhbhum are of uncertain age, and while some are older than the Singhbhum granite, the other relatively unaltered ones, are of post-granite age. To the former group belong the three laccolithic intrusions near Jojohatu some 10 miles west-south-west of Chaibasa consisting of serpentinised saxonite, dunite and lherzolite. The dunite and saxonite have rich veins of chromite, which also occurs as scattered grains in the rocks. The ultrabasic rocks are serpentinised and converted to talc rocks and to talc-and-chlorite-schists. In Seraikela at Barabana and Rajnagar, and at Manpur in Dhalbhum, the younger ultrabasics have given rise to deposits of asbestos of hydrothermal alterations.

ANGARBIRA TRAP.

There is a considerable extent of basic rock a few miles west of Chaibasa which is known as the Angarbira trap after a hill of that name which is made of this rock. It has been correlated with the Dalma Volcanic stage, but the rock is of coarser doleritic or gabbroic texture. Quartz, when present, often forms a micropegmatitic intergrowth with felspar as in the Newer Dolerite.

KOLHAN SERIES.

The group of unmetamorphosed shales, limestones, and sandstones with conglomerates at their base, which lie unconformably

upon the old eroded surface of the Singhbhum granite or the Iron-ore Series, has been constituted into a younger series called the Kolhan Series after the main area of its deposition.

The main basin stretches south-south-west from Chaibasa. The basal beds dip gently away from the Singhbhum granite; in places they are quite horizontal and undisturbed, but they become increasingly folded towards the west and over the phyllites they are as closely folded as the older series. Steeply folded synclinal outliers of the basal beds of the Kolhan Series are found within the Iron-ore Series outcrops. Faulting is common but not easily determinable.

Manganese-ore.

The basal beds of the Kolhan Series, south of Chaibasa, have been replaced by manganese-bearing solutions, and altered to incoherent sericite-quartz rocks in which lenticles and veinlets of workable manganese oxide have been formed. The lavas and tuffs below the basal Kolhan conglomerate have been altered in places to massive haematite before the deposition of the conglomerate.

Newer Dolerite.

The youngest rocks in the Singhbhum district are the numerous intrusions of the basic rock dolerite which have been called the newer dolerites in order to distinguish them from the older dolerites now metamorphosed to epidiorites, associated with the Dalma lavas. The dykes have penetrated the Singhbhum granite along joints, a major set striking north-north-east—south-south-west, and a minor set north-north-west—south-south-east. Occasionally they occupy irregular cracks in the granite and in places have favoured the contact between the granite and the Iron-ore Series. They are found in the metamorphosed form of epidiorite in the Akarsani granophyre, and in the schists north of the shear zone but are almost absent from the Chakradharpur gneiss. They are absent in the granites and gneisses farther west.

The dykes form characteristic ridges marked by innumerable dark-coloured boulders which extend as narrow low ridges across the country.

The age of the newer dolerite dykes is not certain. They were originally regarded as of Cuddapah age as the youngest dykes in South India are of this age. They do not cut through the Kolhan beds and may be of pre-Kolhan age. Although not as much metamorphosed as the Archaean dykes, the uralitisation of the pyroxenes indicate that they are at least older than the Deccan trap.

Tertiary and Recent Deposits.

Tertiary grits occur on the tops of ridges resting on Kolhan shales in South Singhbhum. A small patch overlies the banded haematite-quartzite east of Noamundi.

CANGA.

A recent deposit consists of all kinds of water-worn and angular boulders in a hard ferruginous matrix which is usually lateritic. It is known locally as *Canga*. It is mined as ore on Noamundi west ridge where it consists of iron-ore boulders on a limonitic matrix. It occurs at various levels. Usually it is found along river banks, either above the stream level, or even more than 20 feet above it. There are continuous exposures of *Canga* along parts of the Karo river.

LATERITE.

Laterite is widespread over rocks of the Iron-ore Series, particularly in South Singhbhum and specially over ferruginous rocks. It has been denuded away from much of the northern area by stream erosion. The greater part of the Manganese-ore in Singhbhum, Keonjhar and Bonai is of lateritic origin, and overlies the Iron-ore Series rocks. Lateritic manganese overlies Kolhan shales near Chaibasa and near Balijori (22°17′ N. : 85°45′ E.)

Provisional table of the rock sequence in southern Chotanagpur.

	North Singhbhum.	South Dhalbhum (south of the shear zone).	South Singhbhum.
	Dalma lavas (overlap)	Dhanjori stage. (2. lava) 1. Quartzite conglomerate.	Kolhan series (Purana). (Unconformity).
Iron-ore Series	Iron-ore stage. (Phyllites quartzite, often haematite (impersistent). Iron-ore stage. (Phyllites, calcareous rocks with tuffs and basic igneous rocks possible overlap).	(Unconformity) Iron-ore stage— Phyllites and with lenticular arkose, conglomerate and quartzite. Banded quartzites including haematite (impersistent).	Iron-ore stage. 4. Phyllites and manganese and rare dolomite. 3. Banded haematite quartzite. 2. Phyllites and tuffs Sangramsai conglomerate. 1. Lava.
	Chaibasa stage. Mica schists hornblende schists, quartz granulites and quartz schists, tuffs where less metamorphosed.	Phyllites, lenticular conglomerate, and basic igneous rocks. Each of the above is overthrust against the Chaibasa stage along the shear zone.	

MINERAL OCCURRENCES.

Apatite has been worked in Dhalbhum for many years. Veins of apatite-magnetite occur along a belt, the southern part of which between Patharghara and Khejurdari was at one time part of the

Bengal Iron and Steel Company's concession for phosphoric iron-ore. The Great Indian Phosphate Company worked the phosphate deposits at Badia, Kanyaluka and Surngi, during the first World War but the Company went into liquidation and the lease was transferred to the Indian Phosphate Syndicate in 1919. Mr. E. F. O. Murray has tak n lease since 1940. Mining of apatite round Nandup at the northern end of the deposits has been carried on by Mr. E. F. O. Murray for many years.

The apatite-magnetite veins are found at intervals along a portion of the copper belt between Dhadkidih (22°45′ N. : 86°06′ E.) in Seraikela and Khejurdari (22°24′ N. : 86°39′ E.) in Manbhum. The section between Seraikela border and Garranadi in Dhalbhum, measuring about seven miles, includes the most important deposits. Pure apatite veins are rare and the great majority consist of apatite, biotite, chlorite with varying amounts of magnetite, and rare quartz.

The veins generally occur either in tongues of granite or in close association with it, where the veins occur in mica-schists, small granite veins are seen to penetrate the schists. The granite is highly sheared and altered to a biotite or chlorite schist near the veins. Shearing had continued subsequent to the formation of the veins. The deposits are of magmatic origin and belong to an earlier phase of deposition than the copper lodes, since sulphides are not found in these veins while apatite and magnetite are common in the copper lodes.

Ramchandrapahar (22°43′ N. : 86°13′ E.)—Chandraburu is the centre of the largest deposits. The thickest zone of veins is to the north-east of Chandraburu, where at one point apatite, with schist partings, occupies a width of 60 feet. Another large vein at the southern foot of the hill has a width of 10 feet in places.

At present the apatite-magnetite rock is worked at two places, one near village Surngi, near Dhalbhumgarh, and the other at village Bayanbil north of Ramchandrapahar near Tatanagar, both by E. F. O. Murray. The rock is marketed in natural state for ferro-phosphate or the apatite is ground for fertiliser. The rock has 20 to 40 per cent P_2O_5 and variable proportions of magnetite and quartz. It is used for fertiliser, high phosphorous pig iron and ferro-phosphate.

ASBESTOS.

Asbestos is found in several places in Seraikela and Dhalbhum associated with serpentinised ultrabasic igneous rocks. In Seraikela the ultrabasic rocks, whose hydro-thermal alteration has produced the asbestos veins, are considered as inclusions in the Singhbhum granite. The largest deposits are at Barabana and Rajnagar in Seraikela. In Dhalbhum asbestos veins are associated with hydro-thermally altered ultrabasic rocks which appear to be intrusions

into the granitic and dioritic rocks of the area. The principal occurrences are at Manpur and Gobradih. Small deposits have been found at several places such as Matku, Patkocha (22°36′ N. : 86°0′ E.), Digarsai (22°35′ N. : 86°11′ E.).

An occurrence of asbestos resulting from the alteration of the basic rocks of the Dalma Volcanics about half a mile south of Mahulbassa (25°51′ N. : 86°19′ E.) near Chandil and Patkum has also been reported.

The asbestos is in every case the tremolite variety which is more harsh and brittle than chrysotite asbestos. It forms large "logs" measuring several feet in length and thick veins in the altered ultrabasic rock. It also forms narrow veins in the altered ultrabasic in which the fibres are perpendicular to the vein walls. The rocks are sheared and it seems that the shear planes have afforded the movement of hydrothermal solutions which brought about the serpentinisation of the rock and stress caused the formation of fibrous tremolite.

ATOMIC MINERALS.

The earliest reference to a uranium mineral in India appeared in a German publication in 1860, in which Emil Stoehr recorded the occurrence of "Copper Uranite" an old name for torbernite, a hydrated phosphate of uranium and copper, also known in Indian literature as "Uranium mica", at Lopso Hill in Singhbhum. From the Old English Correspondence Volumes kept in Singhbhum District Record Room it appears that in 1855 on behalf of Messrs Durrschmidt, Grob, Sand and Company, Prof. Stoehr and Mr. Schank had come from abroad to prospect Dhalbhum "geologically and then to fix upon the spots where mines are to be established"*. Many years later it was found again with uranium ochres as encrustations on magnetite-apatite rocks at Sungri (22°27′ N. : 86°33′ E.), in Dhalbhum, associated with libethenite, a hydrated phosphate of Copper.

The Department of Atomic Energy Commission, Government of India, is exhaustively prospecting and drilling the whole copper belt for the development of atomic minerals.

CHROMITE.

Chromite deposits are always associated with ultrabasic rocks. In the Singhbhum district the ultrabasic intrusions into the Dharwars, near Jojohatu near Chaibasa, which have been largely serpentinised carry veins of chromite particularly on the walls of the serpentine, which are up to three feet wide. The veins are lenticular and may extend sometimes to 100 feet along the strike or dip. The deposits are primary magmatic segregations.

---

*Singhbhum Old Records a sister publication may be seen (P. C. R. C.)

The chromite mines are at Kittaburu where chromite is worked at the surface as well as underground. A motorable road connects the mines to Chaibasa at a distance of about 16 miles. Chrome ore is hauled by trucks to the concentrating plant and the concentrates are sent by truck to Chaibasa whence they are despatched to Tatanagar for use in the Iron and Steel Works at Jamshedpur.

There are small mines at Karkatakuti and Roro near Chaibasa.

The Tata Iron and Steel Co., Ltd., have stopped their working at Kittaburu, Roro and Jojohatu, as they now get better quality of ores from their quarries in the Orissa field. Messrs Singhbhum Chromite Co. Ltd., are working their mines both in the surface and underground at Jojohatu (22°31′ N. : 85°38′ E.) about 12 miles west of Chaibasa.

The abandoned mines of the TISCO, Ltd., can be re-worked and their quality can be improved by concentration of the ore comprising simply washing, jigging and floatation at Chaibasa by the side of the river Roro and the concentrated ore can be utilised in the development of Chemical-industry.

COPPER-ORE.

The occurrence of copper in Singhbhum was first surmised from the large number of ancient mine workings throughout the copper belt. As there is hardly any surface indication of copper now, the old workings serve as a guide to the presence of copper lodes. The ancient miners who worked and smelt the copper ores more than 2,000 years ago have left no workable copper down to the ground water level where they ceased working except in the pillars for holding up the hanging walls. They had no doubt considerable skill and occasionally their tools and some utensils made of soapstone and pottery have been found in the workings. Occasionally ancient furnaces made of clay have been found near slag heaps which in many places cover very large areas.

Copper was discovered in modern times in 1847 by Captain J. C. Haughton, Assistant to the Governor-General's Agent in the south-west frontier in a hill near Narayanpur in Seraikela which was called Tamadungri (copper hill) by the local villagers. Tamadungri was a centre of copper industry in ancient times, but at the time of the discovery of copper in 1847 the villagers had no idea of the association of copper with it. Another hill called Tamapahar near Rakha Mines and a village called Tamajuri are reminders of old mining centres.

According to V. Ball the copper mines were worked by Saraks or lay Jains who once occupied the district and there are many tanks and veins ascribed to them. According to Col. Dalton the Jains were driven out of Singhbhum by the Hos. Mining must have been a slow process in that ancient time with crude stone

and later iron implements, and might have been intermittent. The latest period of working was probably between the 3rd and 6th century, since copper coins of later Kushan period were found at Rakha Mines.

The history of modern copper mining, however, is in contrast; a story of successive failures until recently.

Captain Haughton noted the occurrence of copper veins from Bara Topi in Kharsawan to Kamora at the south-west end of the copper belt, and described his findings in a paper on the geology and mineral resources of Singhbhum. Haughton's work brought the deposits into prominence. On the advice of the Board of Revenue detailed geological examination was undertaken by M. Emil Stoehr between 1855 and 1880. The first Singhbhum Copper Company was formed in 1857. About 1,200 cwts. to 1,300 cwts. of copper ore were produced monthly from the mines at Mandup and Jainjora (Seraikela). A smelting plant was erected at Rajdah and highly paid Saxon and English smelters were appointed. Owing to this heavy expense and high ro[illegible] paid to the Rajas of Dhalbhum and Seraikela the company went into dissolution in 1859.

The Hindustan Copper Company commenced operations at Rajdoha in 1862 and although royalties were fixed at half the previous amount, the company became defunct in 1864 after striking copper pyrites at Rajdoha.

The copper belt received further attention from the Geological Survey of India when V. Ball, an eminent Geologist of the Survey, undertook a systematic survey and a summary of the mode of occurrence of copper was published in his *Memoirs on the Geology of Singhbhum and Manbhum.*

The area received little attention for some years after this and meanwhile the Raja of Dhalbhum had sold the mineral rights to Prince Mahomed Bakhtiyar Shah, on whose death they came under the Encumbered Estates Act. The Rajdoha Mining Company took lease of the area from Rakha to Rajdoha from the Government. Work was done both at Rajdoha and Rakha. The shaft at Rajdoha did not cut the ore-bearing lode at a depth of 130 feet, while at Rakha a small lode was cut at 138 feet and a much larger one at 208 feet with long east-west drives. Yet the work came to a close owing to lack of funds. About 1903 Sir Thomas Holland made a private report on the property of the Pat Pat Gold Mining Company at Chakari, near Amda in Singhbhum. He drew attention to the unsatisfactory state of the knowledge of copper ores and on his report the geological survey undertook extensive boring operations along the copper belt. Modern successful mining followed this work of the survey.

The results of boring operations aroused fresh interest in the mining of copper and the Cape Copper Company secured an option on the lease held by the Rajdoha Mining Company in 1907, and carried on development work at Matigara (now Rakha Mines). This Company later bought the mine and production commenced in 1914. Production ceased again in 1922 but the mine was kept open till 1931. The Indian Copper Corporation took an option on the property in 1929.

Meanwhile the Cordoba Copper Company took an option on the Mushabani area of some 20 square miles from the Cape Copper Company in 1920, and purchased the mining rights in 1924. Although the Cordoba Copper Company had developed the Musabani mine to a great extent, yet their finance fell short and in 1929 the Company transferred their assets to the Indian Copper Corporation. This Company also purchased the property of the North Anantapur Gold Mining Company at Chapri and that of the Ooregum Gold Mining Company in Kharsawan. The Indian Copper Corporation started smelting in 1929 at Maubhandar which was connected with Musabani by an aerial ropeway.

The copper belt extends from Duarparam to the north-east of Chakradharpur, through Regadih, Kharsawan, Sini and Turandih, Rajdoha, Rakha Mines, Kendadih to Sinda, and then through Musabani and Badia ending near Baharagora for a distance of about 80 miles. The copper lodes are best developed in the thrust zone between Rajdoha and Badia. The copper lodes occur in all types of country rock; such as mica-schists, quartz-schists, chlorite-schists, hornblende-schists and epidiorite, and in granitic rocks. They are accompanied by the sericitisation, biotitisation and chloritisation of the country rocks in the immediate vicinity of the lodes.

Structurally there are two types of ores, a fine-grained type and a coarse-grained. The fine-grained type is much higher in pyrrholite (Fn Srn 1) and nickel minerals, and is often full of fine unreplaced gangue minerals, such as quartz, biotite, chlorite, etc. The coarser type is usually richer in copper, and in this variety pentlandite $(NiFe)_3 S_4$ is more completely replaced by violarite $(NiFe)_3 S_4$. The Rakha lode is formed more typically of the coarser variety, while the Musabani ore is rather of medium to fine-grained sulphides without much quartz. The latter consists of 'solid' veins of sulphide and disseminated sulphides in a sheared biotitised country. Bands rich in pyrrhotite or in chalcopyrite or in pyrite may be distinguished. Fine quartz is disseminated throughout the ore. The chief copper ore is chalcopyrite $(CuFeS_2)$.

The Indian Copper Corporation is now carrying on mining at Musabani (Mushabani), Badia and Dhobani. Their leases cover an area of over 10.8 square miles, the main property being at

Musabani. Musabani and Badia mines are on the line of the lodes at a distance of two miles and a half but are connected underground. Of two parallel lodes dipping about 30° eastwards, the main lode petered out in depth. The third and smallest mine is at Dhobani, one mile to the west of Musabani.

Between 1929 and 1951, 72,42,363 short tons of ore, averaging 2.172 per cent copper, were treated, producing 1,31,581¼ long tons of refined copper.

Drills operated by compressed air and explosives are used in mining. Crushing plant, workshop and foundry are located on the surface at the site of the mine at Musabani. The ore is crushed and separated from waste rock and carried by aerial ropeway to the concentrating and smelting plant at Maubhandar, six miles away. The plant is electrically driven, power is supplied from the Company's main power station at Maubhandar.

CLAY.

There is a number of clay minerals which have different chemical compositions and the variation in essential physical properties amongst apparently similar clays is due to the relative proportion of the different clay minerals they contain. Clay minerals fall under four main groups:Kaolinite group, Montmorillonite group, Muscovite group, Aluminous group. According to their varying chemical composition and physical properties clay has different uses. It has often been seen that a quarry is worked for one particular quality of clay suitable for a single industry. Other qualities of clay that may occur in the quarry but not required for that particular industry are rejected in waste dumps. If the different varieties of clay mined from a quarry are classified, conserved and marketed according to needs of industries, costs will be reduced all round and much valuable raw material which may be required for the industrial progress of the country will be conserved.

The principal property of clay is plasticity which is its ability to yield readily to pressure without rupture and to retain the shape imparted to it. Plasticity is developed when clay is mixed with the requisite quantity of water. Clay-water mixtures lose the water when dried and contract in the process. The volume contraction expressed as a percentage of the original volume is known as shrinkage. Clay undergoes shrinkage even after drying during heating. The other important properties are behaviour under fire for ceramic industries and range of fusion temperatures which are important in refractories industry.

There is no such thing as pure clay since clay comprises a number of clay minerals which may occur individually or in association with each other and with non-clayey substances such

as silica, silicates, oxides, carbonates, etc., or iron, calcium, magnesium, soda and potash in many compounds. Some of these so-called impurities when present in appropriate condition and quantity impart certain qualities to the clay which make it suitable for particular industries. Silica as sand is the common impurity. Its presence reduces shrinkage and gives rigidity to the clayware but makes the clay unsuitable for fire bricks. Iron imparts red colour and in limited quantities, may make the clay suitable for bricks, but is otherwise undesirable. Lime and magnesia in silicates and carbonates lower the heat-resisting capacity and cause disintegration of wares prepared at low temperatures in contact with moisture. Alkalis lower the fusion temperatures, but are desirable in the manufacture of porcelain, acid-resistant ware, and glazes.

Deposits of china clay occur at a number of widely separated places. They are either in the granite itself near its margins or in the rocks immediately adjacent to the granite and have resulted from kaolinisation and sericitisation of the Singhbhum granite and the adjacent country rock by hydrothermal agencies. The granite of northern Singhbhum is a rather felspathic type and was thus favourable for the formation of Kaolin deposits. The chief deposits are described below :—

Majri (22°42'N. : 85°40'E.).—This deposit has yielded a large quanity of china clay. The Kaolin has resulted from the alteration of sericite-chlorite-schists at the boundary of the granite and the adjoining fine granite. The deposit has a high quartz content.

Raghunathpur (22°47'N. : 85°59'E.), *north of the village*.—The deposit is more of a siliceous clay. The deposit is derived from the Kaolinisation of felspathic mica-schists associated with granitic injection.

Rangamatia (22°46'N. : 86°02'E.).—The deposit is relatively a large one about half a mile to the west of Rangamatia derived from the alteration of a felspathic schist.

Chapra (22°42'N. : 86°01'E.).—The deposit is on the boundary of granite and shale and is derived from the granite.

Bharatpur (22°42'N. : 86°09'E.).—This is a good deposit on the granite boundary, but is a little siliceous.

Near railway station Kendposi, P.O. Chaibasa, there are quarries of china-clay deposits at Balidaskand village, Bhonda, Dudhjuri, Dumaria, Karsa Kola, Balkand and Kamji.

There is an extensive deposit quarried at a depth of below 40 feet at Gundiposhi in the Kolhan (Kendposi R. S.). Another large deposit is at Karanjia, P. O. Hatgamaria, where the best

quality Kaolin is found. Another deposit worked in this neighbourhood is at Raikaman village, P. O. Majhgaon. The deposits of Kaolin are also located at Gundiposhi and Gaira (about 9 miles west of Chaibasa).

GOLD.

Alluvial gold has been washed from the alluvium and sand from some of the rivers of Singhbhum, notably the Subarnarekha and the Koel in the neighbourhood of Bera Kasari (22°32′N. : 85°14′E.). The source of the gold appears to be the numerous small veins of quartz which occur in both the phyllites and epidiorites.

The gold resources of Chotanagpur were investigated in 1904 by Dr. Maclaren. Maclaren described the gold-bearing quartz worked by the "ancients" at Sausel (22°37′N. : 85°17′E.). The gold was accompanied by galena in quartz veins which traversed chlorite schist.

The mica-schists of Sonapet (22°53′N. : 85°40′E.) are riddled with gash veins and masses of quartz which are probably the source of the alluvial gold in the Sonapet valley.

The range south-west of Ragadih (22°53′N. : 85°39′E.) along the southern side of the Sonapet Valley contains abundant quartz veins and gold was worked here in the past about 1888. The ruins of the mine buildings may still be seen overgrown with jungle.

In modern times gold veins have been worked at Kendarkocha (22°18′N. : 86°16′E.) in Dhalbhum by the Dhalbhum Gold and Minerals Prospecting Company, Ltd. from 1916 to 1919 after which the mine was closed down owing to heavy expenses. The lease was taken over in 1924 by Mr. E. F. O. Murray who is now working it privately. From 1929 to 1934 he treated 952 tons averaging 11.23 cwt. and yielding 540 ounces. About 1,000 ounces of gold are said to be still available in the tailings.

The original company had prospected nine so-called deposits in the neighbourhood of Kendarkocha of which only one, the Porojarna mine, proved really payable and is being worked by Mr. Murray.

According to Dunn, gold veins (quartz veins) are found only in the zone of schists directly beneath the main Dalma lava flows, and future prospecting should be confined to this zone on either side of the flows. There is also a belt along the southern border of Dhalbhum from Kendarkocha westwards into Seraikela. Other belts are the belt of schists striking east from Narayanpur (22°45′N. : 86°00′E.) in Seraikela to Matku (22°41′N. : 86°14′E.), the narrow belt of schists striking north from Udal (22°32′N. : 86°15′E.) and going to the former main schists belt west of Matku. Along

this last belt gold was noted at Digarsai (22°35′N. : 86°15′E.). Attention should be paid to those veins which carry blue-grey quartz. In Ichagarh (23°02′N. : 85°57′E.) goldbearing veins were worked by the Golden Reef Mining Syndicate but have recently been taken by another enterprise. This area has been geologically investigated but it is apparently a simple ore, the gold being readily susceptible to extraction by amalgamation after crushing in stamp batteries.

IRON-ORE.

The Indian Iron and Steel Co., Ltd. (Managing Agents; Martin Burn, Ltd.) have their mines at Gua and Manoharpur where large reserves are available with an average content of 60 per cent of iron. S. Lal's mine is at Kantoria village near Barajamda railway station.

The Tata Iron and Steel Co., Ltd., have their mines at Noamundi which are being worked since 1925. The deposits occur chiefly on two parallel ridges running roughly north to south, each about two miles and a half long and half a mile wide at the north, becoming wider to the south and extending into the Keonjhar district of Orissa. There are two grades of ore: the first grade has 59.65 per cent and the second grade 66.90 per cent of Fe.

Recently several concerns have been granted mining lease for extracting iron-ore around the main fields of Noamundi (Itarbaljuri, Kumirta, Utsill, Surbil, Kumirha, Gundijore, Baljori and Barabaljori); Gua (Nuia P.F.; Budha Hill, Banki and Ghatkuri) and Jamda (Bijoy, Bamiaburu, Bariaburu, Taiba, Baljori, Mohudijrapahar, Mergada, Lupunga, Karampada, Katinta, Jagtaburu and Raike), but most of the firms are working in the old style of mining methods and are not keeping pace with modern scientific development as regards extraction and development of the mines.

Mention has already been made of the iron-ore deposits of the Kolhan in South Singhbhum. In addition to these, small deposits are found in Porahat, such as on Bichuaburu to the south-west of Saruda (22°18′N. : 85°12′E.). Much of the haematite occurs as a fine powder. The deposits are scattered and impersistent. In the same neighbourhood iron-ore may be found on the southern side of Araburu and on the south-western side of Barangburu.

The hills near Lukidburu (22°40′N. : 85°27′E.) contain bands of haematite-quartz-schists interbedded with phyllites. Some of the former are almost iron-ores.

Haematite-schists and haematite-quartzites crop out in the ranges which form the boundary between Dhalbhum and Manbhum, north of Kundlun (22°47′N. : 86°23′E.).

Another belt of ferruginous schist varying to banded haematite-quartzites and iron-ore extends eastwards from the Kharkai river at Samran (22°44′N. : 86°04′E.) in Seraikela. In a more or less continuous bed of banded haematite-quartzite which grades at intervals to a ferruginous phyllitic schists, east and west of Jaikan (22°43′N. : 86°07′E), high grade specimens of iron-ore may be obtained.

An extensive banded haematite-quartzite crops out on some hill tops overlying serpentine and hornblende schists, south-east from Bhitardari (22°40′N. : 86°12′E.). Banded quartzites, often haematitic, extend at intervals from Binburn through Patka south-eastwards towards Udal (22°32′N. : 86°16′E.).

Haematite-phyllites are common in the chloritic phyllites and mica-schists on the Dhalbhum-Mayurbhanj border some of which form a soft iron-ore, but the quantity is nowhere very large.

MAGNETITE.

A small deposit of titaniferous and vanadiferous magnetite occurs as a contemporaneous magmatic dyke and veins in the basic rocks at Dublabera (22°29′N. : 86°17′E.). It has been leased by the Dublabera Mining Co. Ltd. Small quantities of the ore were exported before the War and a method of treatment for extraction of Vanadium was worked out by Messrs Christiana Spigerverk of Oslo in Norway. About 2,000 tons of ore have been disposed of in India.

MANGANESE.

Singhbhum is not an important producer of manganese. Deposits of manganese-ore in the Singhbhum district occur both in the Iron-ore Series and the Kolhan Series. The former type is found in southern Kolhan and at Ledaburu (22°28′N. : 85°23′E.), where manganese-ores occur as thin lenticles in phyllites, as irregular replacement masses in cherts and as manganiferous surface laterite. The higher grade deposits (over 48 per cent Mn. suitable for the manufacture of ferromanganese) are generally associated with cherts. The largest deposits are of the lateritic type which may be also of high grade. At one place near Gua, an outlier of the basal Kolhan Series conglomerate contains a little manganese. The South Singhbhum deposits are small but others are likely to be found. In northern Singhbhum there is an occurrence of manganiferous laterite at Lanji (22°49′N. : 85°35′E.), and at Basadera (22°40′N. : 86°30′E.) in north-eastern Singhbhum manganese occurs in phyllites.

Deposits associated with the Kolhan Series occur close to Chaibasa. The ores have replaced both the basal sandstone and limestone. They occur as thin lenticles parallel to the bedding

of the rocks, or as lateritic material at the surface; the latter is commonly high in iron. The ores are concretionary and consist of psilomelame and pyrolusite. The manganese has been segregated by solutions which obtained their manganese content probably from the underlying mangniferous rocks of the Iron-ore Series.

The Indian Iron and Steel Co., Ltd., have their mines at Gua in South Singhbhum and Manoharpur. Sri N. V. Rathor owns mines at village Sendaburu near Barajamda. The ores are both high and low grade and are marketed in raw state.

Refractory Materials : Kyanite.

Along the northern side of the copper-belt, kyanite occurs associated with kyanite-quartz granulite and aluminous mica schists along a belt about 80 miles long stretching east from the western side of Karaikela to Dhalbhum as far as Shirbaidungri (22°21′N. : 86°40′E.) through northern Singhbhum, Kharsawan and Seraikela. The kyanite occurs as segregation and veins in these rocks. Apart from a few deposits of massive kyanite in schists near Lapsaburu and a small deposit at Ghagidih, much of the kyanite occurs as large and small boulders on the surface and buried in the soil. The ore is won by quarrying on the hill sides. The Lapsaburu deposit in Kharsawan (22°48′N. : 85°44′E.) is one of the richest deposits in the world and is estimated to contain over 30,00,000 tons. Apart from Lapsaburu deposit in Kharsawan, small deposits are also located in the villages of Lepta, Karkatta (Rajkharswan) and Kera (Kharsawan). Other small deposits are at Jhar Gobindpur (22°48′N. : 86°05′ E.) in Seraikela, Ghagidih (22°45′N. : 86°11′E.), between Badia and Bakra Kanyaluka (22°28′N. : 86°31′E.), and at Mohanpur (22°34′ N. : 86°32′E.). The mineral also occurs near Rakha Mines east ridge, Shirbai Singpura (22°22′N. : 86°35′E.), Chirugara (22°33′N. : 86°31′E.), north-west of Dhoba (22°32′N. : 86°31′E.) and north-west of Bhakar (22°23′N. : 86°36′E.).

Small deposits of kyanite-rock occur along a narrow belt 7 miles in length extending from Ichadih (22°04′N. : 86°10′E.) to Salbani (23°04′N. : 86°17′E.), but owing to the high percentage of mica present in the rock it is not suitable for refractory purpose.

The Indian Copper Corporation, Ltd. own the mines at Lapsaburu where there are several quarries. The larger boulders are blasted. The material is exported in raw state after washing and dressing to all parts of the world, including United States , United Kingdom, Belgium, France, Australia, Sweden, etc. Messrs K. M. C., Ltd. and Messrs Misri Lall Dharam Chand, Ltd. are working their quarries at Lepta, Karkatta and Kharsawan respectively.

The Eastern Mineral, Ltd. are working mines at Ghatsila and Mr. E. F. O. Murray works the ore at Kanyaluka.

Kyanite containing over 60 per cent Al_2O_3 is used as a refractory material after calcination.

Limestone.

The limestones found in the Singhbhum district are generally *impure and not suitable for industrial purposes such as flux in* the steel industry, chemical and cement industries.

There is a zone of limestone immediately overlying the basal sandstone in the Kolhan Series where outcrops extend from Chaibasa to Jagannathpur (22°13′N. : 85°39′E.), a distance of about 30 miles. It is of variable thickness thinning out completely in places attaining its greatest thickness of about 40 feet near Rajanka (22°26′N. : 85°44′E.).

The Associated Cement Company, Ltd., are working the Kolhan limestone at Jhinkpani. It is a high grade material with over 48 per cent CaO and is used in the manufacture of Portland cement. It is a pink, grey or greenish limestone often containing thin lamellae of phyllite, shale or chert.

Mica.

A pale-green mica has been prospected at Purnadihi (22°20′ N. : 86°39′E.), Bengaria (22°19′N. : 86°38′E.) and Laubera (22°32′ N. : 86°41′E.).

Mineral Pigments.

Three classes of mineral colours are in commercial use, namely — (1) natural mineral pigments, (2) pigments derived by direct treatment of minerals as sulphides and (3) chemically manufactured inorganic pigments. The natural mineral pigments include yellow ochre, red ochre, red oxide, ground slate and sometimes shales also.

Red and yellow ochres of fair quality are found in the Iron-ore Series phyllites in the neighbourhood of Goilkera (22°31′N. : 86°23′E.). Some 2 miles south of Kuira (22°32′N. : 85°31′E.) massive shales grade to fine red ochres over quite a wide area. There are many similar occurrences in southern Kolhan. The villagers in Dhalbhum obtain ochre for colouring their huts from the ferruginous phyllites near Mangru (22°29′N. : 86°16′E.) and north of Maheshpur (22°23′N. : 86°30′E.). Clays at Metaibandi (22°33′N. : 86°38′E.), Karhi Dungri (22°32′N. : 86°45′E.) and near Dharadih (22°43′N. : 86°42′E.) are used as a colour wash.

In the hills along the edge of the Dalma Lavas to the south-east and west of Chandil (22°57′N. : 86°04′E.) there are deposits of red ochres and black carbonaceous phyllites.

In the Porahat at Bichuaburu (22°39′N. : 85°24′E.) Karamtaburu (22°40′N. : 85°25′E.) and Lukudburu (22°40′N. : 85°27′E.) there are considerable deposits of micaceous haematite which have not yet received attention.

TALC.

There is a series of soapstone and talc-schist deposits which extend from east to west across Singhbhum parallel with the copper belt. The best of these is in the hills north of Bhitardari (22°41′N. : 86°11′ E.) where the talc is accompanied by magnesite. There are some old workings at the place which show that the ancient people here were more efficient in quarrying and mining. Smaller deposits occur at several places along the copper belt, the one at Mahulisol (22°28′ N : 86°34′E.), north of the copper belt, is one of the largest in Singhbhum.

There is another group of talc deposits in the southern part of Dhalbhum. Soapstone is also associated with the chromite-bearing ultrabasic rocks near Chaibasa and extensive deposits have been quarried at Nurda (22°20′N. : 85°41′E.), 18 miles south-west of Chaibasa.

There is a good deposit of soapstone round and about Patkum near Ichagarh (23°02′N. : 85°57′E.) and the stones produced are extensively used for manufacture of idol, plates, bowls and the like.

POTENTIAL POSSIBILITIES.

Manganese and Iron-ores.

The minus half inch rubbles available along with the lumpy ores are mostly thrown away. They generally analyse from 47 per cent to 52 per cent iron content. Millions of tons of this material are lying in huge dumps near about all the working mines. They can easily be converted by simply washing in trommels, crushing to minus sixteen mesh size and sintering the product. The sinters on an average will analyse 60 per cent iron content. In addition it will save the railing and shipping space owing to increase in density and loss of moisture. The sinters may be enriched in metal content by additions of blue iron-ore dust that is occasionally available along with haematite. This is generally thrown away. This analyses 62 per cent to 69 per cent iron content on an average. Huge dumps of this material is lying near about Tatas and Indian Iron and Steel Co.'s mines. This material will save the crushing cost to minus 16 mesh size for sintering.

The manganese-ore of the district is poor in quality and quantity, occurring primarily in the form of pyrolusite and polyanite with occasional lenses of psilomelane. Nothing more than 50 per cent of the total output will fall within saleable commercial grades. To avoid mining non-saleable mineral, the practice

prevalent in the area is selective mining which can never satisfy the prescribed mining regulations. Hence, beneficiation is a dire necessity here, adoption of which will eliminate mining complexity as also will add to quality and quantity of the product. Barring investment in machinery, the process is simple and quite well paying. Even the most coveted quantity-production of manganese-dioxide for dry batteries and artificial manganese dioxide for jet-propulsion aeroplanes is possible.

CHROMITE.

A concentration plant comprising simply washing, jigging and floatation in Chaibasa by the side of the river Roro may be used in producing potassium or sodium dichromate or chromic acid or electrolytic chrome metal or chrome plating. The possibility will be brighter with the availability of cheap electricity from Damodar Valley Corporation.

KYANITE.

Huge deposits of poor grade material are lying dormant near about Ghatsila. With the availability of D. V. C. cheap electric current, it will be a paying proposition to start a beneficiation plant near about Ghatsila and utilise the concentrates in the production of mullite and later on to refractory bricks and tiles.

ASBESTOS.

Good materials of amphibole asbestos is available in Seraikela deposits, but in other places in Singhbhum the deposits are poor but abundant in quantity. These poor varieties may either be beneficiated or be converted to asbestos roofing sheets by installing a plant near about Haludpokhar.

SOAPSTONE.

Very poor in quality. It may be profitably utilised in producing flooring types, electrical goods and household fancy materials.

REFERENCES.

NOTE.—The above chapter on the Geology of the Singhbhum district has been compiled from the publications of the Geological Survey of India and the Directory of Mines and Metals. The following are the main sources of information :—

(1) *Manual of the Geology of India* : Pascoe, E. H., Government of India publication.

(2) *Geology of North Singhbhum including parts of Ranchi and Manbhum districts* : Mem. Geol. Surv. India, Vol. LIV, Pt. 2, 1929.

(3) *The Mineral Deposits of Eastern Singhbhum and Surrounding Areas* : Mem. Geol. Surv. India, Vol. LXIX, Pt. 1, 1937.

(4) *The Geology and Economic Mineral Resourecs of Bihar* : Mem. Geo. Sur. India, Vol. LXXVIII, 1941.

(5) *The Stratigraphy of South Singhbhum* : Mem. Geol. Surv. India, Vol. LXIII, (3), 1940.

(6) *The Iron-ore Deposits of Bihar and Orissa* : Mem. Geol. Surv. India, Vol. LXIII, Pt. 2, 1934.

(7) *The Gabbro Rocks Found Near Gorumahisani Pahar, Mayurbhanj State, Orissa, and the Origin of the Associated Magnetite Deposits* : Chatterjee, S. C. Proc. Nat. Inst. Sciences, India, Vol. XI, No. 3, 1945.

(8) *The Structure and Origin of the Banded Haematite Jaspers of Singhbhum,* : India : Spencer, E. and Percival F. G., *Economic Geology*, Vol. 47, No. 4.

CHAPTER III.

HISTORY.

Singhbhum, that sub-montane region forming the southern fringe of the Chotanagpur plateau, has a hilly upland tract, containing hills alternating with valleys, mountains which were formerly forest clad ; and in the river basin stretches of comparatively level or undulating land. Situated, between ancient Magadha country and the territories in the extreme east, nature had destined the area, to be a refuge and harbour of peoples, who had lost political hold in the plains. While having been supplied with rich mineral ores the exploitation of which naturally would not be neglected by man for his economic and social needs it attracted civilized men. These two roles, which history had destined for the area, run through the whole gamut of its existence, though very little is known about its ancient history. Even the present name, Singhbhum' whether you call it the land of the Singhs, or derive it from *Sing-bonga*, the divinity of the *ab-origine*, is of recent origin, and we have no knowledge about its early history. Most possibly, it was included in the ancient *Suhmadesa*, because it was also the marchland between the Gangetic delta and the eastern sea coast. In the *Ramacharita*, compiled by Sandhyakaranandi, during the reign of Emperor Ramapala, there is mention of an area called *Atavika-desa*, whose chief was Lakshmisura. This might be the present Singhbhum, Seraikela and Kharsawan territories. The echo of this is found in the early annals of the British in India when this area was known to them either as the jungle territory or as *garhjat*. The *Puranas* also mention several tribes such as *Bahirgiryas*, *Antargiryas* and *Suhmottaras**. The general presumption has been that *Antargiryas* and *Bahirgiryas* are peoples of Santhal Parganas. This is probably too far-fetched and *Antargiryas* probably stand for the inhabitants of the Chotanagpur Division such as Ranchi, Palamau, etc., while *Bahirgiryas* were probably the residents of Singhbhum and Dalbhum areas. The *Suhmottaras* require no explanation. Beyond these, it is very difficult to find any reference to the area which was probably outside the pale of information of the Pauranic geographers.

STONE-AGE INDUSTRIES—PALÆOLITHS.

Nature had bestowed on the area, all the amenities of life, under which the hunters, fruitgatherers and the cave-dwellers could easily flourish. Therefore, stone-age remains have been found in Singhbhum; but, not to the extent that would give satisfaction to the inquisitive mind. While the last half of the 19th century saw in Europe a brisk progress, in the systematic study

* *Bramhanda Purana*, 49—56 f.f. *Vayu*, 45—120 f.f.

of the early stone-age industries, our information not only about Singhbhum but for the whole of Bihar, is still so elementary, that it is difficult to reconstruct a complete picture of the habits and habitations of early man. Systematic and well-planned excavations have been absent ; and our knowledge is derived from the love of labour bestowed by few individuals who had come for totally different purposes, but were attracted by the finds. The result of this random collection is our only source of information about the stone-age in Singhbhum. The first discovery of such remains was made by Capt. Beeching in 1868, when he marched from Ranchi with a company of the 10th Madras Native Infantry, to pay some attention to the old Keonjhar State. A number of chipped implements usually found either lying loose in the gravel or in sandy depressions were found near the rivers of Chaibasa and Chakradharpur. V. Ball in his comments pointed out that the remains consisted of some chert flakes and knives. There was strong evidence of their human origin and those found at Chakradharpur were within three miles of the nearest source of the material, which was highly vitrified quartzite. He referred them to the palaeolithic or the old stone-age*. He himself also found similar stone implements in 1870†. Again in 1874 some more stone implements were found, consisting of a large adze of excessively dense and hard quartzite, wedge-shaped stone of the same material and a smaller adze of a black igneous rock, all of the shouldered celt-type, already found in Burma‡. Very recently, such stone artifracts have been found at Durgapur, while the Damodar Valley Project was being carried out. The close resemblance of form, which these bear to the implements of Burma, possibly suggest affinities, which require further proof. The theory is that, both these areas were probably inhabited by a people, in a distant antiquity, having common origins,

In 1912, the late S. C. Roy of Ranchi drew our attention to the pre-historic antiquities found in Uttar Pradesh and Chota-nagpur and thought that there are grounds for inferring that, the Mundas and the other Kolarian tribes, originally lived in the hilly regions along the Aravali and the Vindhyan ranges and gradually spread to the north and occupied the valleys of the mighty rivers of northern India; which was followed by an admixture with the Dravidians. In 1917, Mr. C. W. Anderson, brought to our notice a number of implements from the valley of the Sanjaya and the tributary streams. The head of a wild horse, very much allied to the modern horse, was discovered. The implements were both chipped and polished which possibly show that they

* *Proceedings of the Asiatic Society of Bengal*, 1868, p. 177.

† *Ibid*, 1870, p. 268.

‡ *Ibid*, 1875, pp. 118—120.

belong respectively to the old and new stone-ages*. In 1918, Sri S. K. Biswas came across a few polished hammer stones in Singhbhum ; and presented them to the Geological Department of the Presidency College, Calcutta. According to Sri Biswas one of them was obtained from Nadup or Ladup, about five miles south of Kalamati Railway Station, of the South Eastern Railway; and the other about a mile and half, east of the workings of the Cape Copper Mines at Matigara. They were noticed by the late Prof. H. C. Das Gupta, who was of opinion that the implements were all found on the debris at the mouth of ancient copper mines. The rocks which were utilised in preparing the specimens are hornblende-schist, a rock which is not very common in the area. The strata are phylitic and quartzite, showing that the rocks used for the manufacture of the implements, must have been brought there by the persons, the remnants of whose handicrafts they are. The implement was broken and had a thickened head followed by a portion which is flat. A similar specimen was found by Mr. Rivett-Carnac in Banda. It is rather difficult to say definitely anything about the uses to which this peculiar implement was put. But, in consideration of the fact that it was found with the debris, at the mouth of old pits, dug for copper ores, it may be inferred that it was used as a hammer to break the cupreous rocks; but the precise way in which it was handled is still unknown to us†. V. Ball also noticed ancient copper workings in Singhbhum, as early as 1869, when he stated that they are attributed to the *Seraks*, possibly a race of Bengal Brahmins. But, he was not sure whether these miners worked with stone implements or not. The fortunate finds of Sri Biswas puts an end to a long standing puzzle.

About ancient mining Dr. Stoehr, the geologist, has written :—

"In spite of the rudeness of the mode of extraction, the work must be admitted to have been sagaciously conducted. The ancients never went deep, sometimes hindered by the water, which everywhere is reached below the level of the valleys, sometimes by the fear of working underground. The use of powder in blasting must have been unknown to the people of that time. for I everywhere found in the old works, where open, single pillar undisturbed, very rich in ore, but in such hard rock as only to be won by blasting. The ancients seem to have smelted the ore in little furnaces on the spot, for one finds remains of walls, heaps of slag, and even copper bloom in many places. It is impossible to determine the age of the old workings ; the heaps and fallen-in pits are mostly overgrown by thick jungle and covered by old trees ; only here and there one finds large openings

* *Journal of the Bihar and Orissa Research Society*, Vol. III, pp. 349-362.
† *Indian Antiquary*, Vol. XLVII, 1918, pp. 135-36.

in the rock, at present the refuge of crowds of bats, whose dung covers the floor more than a foot deep; the cavity itself being converted into a beautiful green hall by a thick crust of malachite.

" If one asks the inhabitants when such work was in progress, they do not know; and they speak of 100 years with the vague ideas of Asiatics about time, representing thereby an arbitrarily long period. It seems to me, however, certain that the present half-wild inhabitants are not in a condition to carry out such works and these may be relics of an ancient civilization, like the rock temples of the neighbouring Orissa, like the fruit trees (mango and tamarind) that one often finds as very old trees in the middle of the thickest forest; as again the remains of the great town Dalmi, which once stood in the thick woods of the Subarnarekha. Only one story has reached me of the ancient mines. Where from the lofty Siddheswar, the ridges of Bindraban, Ramgarh and Mahadeo descend into the valleys as spurs, one finds on Bindraban extensive old diggings and pits, and on Ruamgarh slag-heaps and remains of brick walls. There, at Ruamgarh, a Raja of the name of Ruam must have lived and have made the diggings and houses. In the story this Raja is reported to have two tongues, so I must consider him as a person who spoke two languages, in fact a foreigner."*

Further enquiry regarding these ancient mines was made by Professor Ball in 1868. He found "ancient excavations in every conceivable situation, at the tops of hills, in valleys, in the thickest jungles, and even in the middle of cultivation where the rocks are obscured by superficial deposits. These excavations show that the ancient miners had carefully searched the country and had considerable mining skill, while the slags furnish conclusive evidence of their proficiency as practical metallurgists. The mines, he found, were attributed to a people called Seraks, who once held the country. The same tradition of the former rule of these people was discovered by Major Tickell, who in 1840 wrote:—"Singhbhum passed into the hands of the Surawaks, a race, now almost extinct but then numerous and opulent, whose original country is said to have been Sikharbhum and Pachete. The oppressions of the Surawaks ended in their total expulsion from the Kolehan."†

CHALCOLITHIC AGE.

Our ignorance about the copper age in Singhbhum is colossal, notwithstanding few copper weapons that have been found in

* *Copper Deposits of the Singhbhum, Records of the Geological Survey of India*, III, 93.

† The Hodesum (improperly called Kolehan), *Journal of Asiatic Society of Bengal*, 1840, p. 696.

Singhbhum and are now displayed in the Patna Museum. They cannot be separately described from the Chotanagpur specimens which by their typology show historical contexts. Because, it is quite conceivable that in this remote area, copper age might have lasted to a later date than in the plains. But what passes our comprehension is the condition of these areas when brilliant chalcolithic civilizations were flourishing in Sindh and the Punjab. What were these people doing when over the charred remains of Rupar I, the people making the 'Painted Grey ware' were residing. These questions can only be answered when the excavator's spade, wielded scientifically, has yielded a mass of evidence. Still more meagre is our knowledge of these areas, when the Mauryan legions were hurling back the Greeks under Selukosh beyond Hindukush, or when Udayin was transferring his prehistoric capital of Rajgir, to the confluence of the Sone and Ganges, at a place called Pataligama. Nor we think that these happy hunting dens of Carnivora, with its world of birds and eternal forests, were very much disturbed when the last Mauryan king was murdered by his general within the palace of Asoka and Chandragupta. The pages of history, busy as they have been with the doings of the kings, their grandeur, their generals and nobles have forgotten to note the heart throbs of the humble hill people. But, it is possible that the rich minerals of this backward territory were in demand in the great metropolitan cities of ancient India.

It is quite possible that Singhbhum, along with the greater portion of Chotanagpur, was included within the empire of Samudragupta if " all the jungle countries" mentioned in the Allahabad Pillar inscription of the same monarch is correct. Because, according to the late Dr. D. R. Bhandarkar, the forest belt extended from Baghelkhand up to the coast of Orissa. Then, for centuries, we have no information. In the 7th century of the Christian era we are faced with an unknown dynasty issuing a peculiar type of coins known as "Puri-Kushan" coins. These coins were preceded by some Roman gold coins, belonging to the Roman Emperors, Costantine, Gordian, etc. The find of Roman coins does not imply anything of significance particularly when, they were not found in Singhbhum proper, but, at Bamanghati, in the Mayurbhanj district of Orissa. On the west, there was the famous port Tamarlipti, known to the classical writers as *Tamalitis*. On the east, were the famous ports of Kalingapattanam and Dantapura, called by the Greek and the Roman geographer *Dandagula*. Therefore, Roman gold coins are likely to be found in Orissa and Singhbhum. Puri-Kushan coins, however, are a different proposition which requires to be dealt with in greater detail.

Formerly, this series of coins were taken to be temple tokens, but, the subsequent evidence has made this theory untenable ;

and we may safely recognise it as a currency, used all over Orissa and the adjoining territories. The first recorded find of the so-called Puri-Kushan coins was made at least four miles west of Purushottampur, close to the modern village of Pandya, in the Ganjam district in 1858. The next find was made, in the Puri district in 1893, at the Gurbat Salt Factory, Manikratna. The third find was made on the 31st May, 1917, on the northern slope of Rakha hills, in the neighbourhood of the ancient copper workings, in the Singhbhum district. 910 copper Puri-Kushan coins were sent to the Asiatic Society of Bengal by the then Collector of Balasore. In 1923 another hoard of the same type of coins, in association with the copper issues of Kanishka and Huvishka, was found at Bhanjakia, in the Mayurbhanj district of Orissa. The late Mr. R. D. Banerji refers to a hoard of 282 coins having been found in the old Mayurbhanj State. In that hoard there were 112 coins of the Imperial Kushans. Similar coins were also found at Biratgarh, Nuagoan and Sitabinjhi.

The type generally consists of the figure of a god or king wearing Central Asian costumes as in Kushan coins. One coin of the Rakha hill mines find bore a legend, which was not the case with any Puri-Kushan coins so far found. The legend was on the obverse, while three cones had taken the place of the Kushan king; and below them was the word *tanka*. The characters belonged to the 7th century A. D. Except stray notices very few attempts have been made to assess these hoards critically.*

The find of these coins, in association with the copper issues of the Imperial Kushans, raises a very important point. They seem to have been followed, if not actually contemporaneous, with these issues. The find of coins of Kanishka and Huvishka along with these coins, seems to corroborate this theory. Because the Great Kushana Empire, which extended from the Caspian sea to the Narbada, disintegrated after Huvishka. The diffusion of the coins of Kanishka and his successors is indeed great. Little is known of the fact, that hundreds of uncharted ruined sites, in Basti district of the Uttar Pradesh, districts of Champaran and Shahabad in Bihar have yielded such coins. Gold and silver may be carried to most distant lands, due to extensive commercial intercourse, as was the case with the find of Roman coins at Bamanghati and elsewhere; where, by no stretch of imagination, can we prove the existence of Roman political influence, but, not copper. The silver coins of the Great Kushans have been found in East Bengal; therefore the occurrence of copper coins in Orissa and Chotanagpur need not surprise us. But what is interesting is their occurrence at such widely separated places as Ganjam, Barabhum, Puri, Mayurbhanj, Balasore and Singhbhum.

---

* *Journal of the Numismatic Society of India*, Vol. IX, p. 105ff.

In the first place they prove that these were not temple tokens. They were current in the ancient States of Suhma, Odra, Kalinga and Utkala. The late Mr. R. D. Banerji propounded the theory that when northern and southern Bihar were annexed to the empire of the Great Kushans, Orissa and the eastern seaboard as far as the Rishikulya and Languliya rivers were also conquered. And, this implies that Singhbhum, Manbhum and portions of Chotanagpur also might have shared that fate; but, as far as Puri-Kushan coins are concerned we have to find out whether these were imitation of Kushan coins struck in Orissa; or, whether they were actually issued by Kushan mints. On this point there would be controversy. Some of the coins examined suggest that they were not Kushan imitations but possibly supplanted their issues, when contact with the Kushans ceased in eastern India. Secondly, they indicate that they were not issued by any minor dynasty of Orissa, but, by a line of monarchs, whose territories extended, from Ganjam to Singhbhum. But, history at present is not aware of any such dynasty. The Rakha hill mines find, near the ancient copper workings, is important, inasmuch as it indicates the possible existence of a mint in the locality.

In the seventh century of the Christian era, Sasanka, of unknown lineage, must have ruled over this territory. From the *Harsha Charita*, we learn that Rajyavardhana was killed by the king of Gauda. But, according to Yuan-Chuang, Sasanka, the king of Karna-Suvarna, in eastern India, killed the Thaneshwar king. A seal of Sasanka was found engraved on the hill of Rohtasgarh and Ganjam Plates of Madhavaraja the II dated in 619-20 A. D. mentions him as *Maharajadhiraja*, that is, the suzerain lord of Ganjam. Two copper plate records of Sasanka's reign found at Midnapore, establish that the jungle area too was under his control. Therefore, Sasanka probably ruled from Shahabad to Ganjam in the early half of the 7th century A. D., when Singhbhum in all possibility came to be included within his empire. We have no knowledge of what happened to Sasanka; but, this is definite that he lost his realm to the combined attack of Harsha and his ally Bhaskaravarman of Kamrupa. The tradition at Kichang, six or seven miles away in Keonjhar, which ascribes the temples at Benusagar to a king named 'Shashanka' may be partially correct.

The antiquarian remains at Benusagar belong to the Pala period. The copper plate record found at Bamanghati introduces us to yet another dynasty known as Bhanjas of Orissa. These rulers are divided into several dynasties such as the Adi-Bhanjas of Khijjinga-Kotta, the earlier Bhanjas of Khinjali-mandala, the Bhanjas of Baudh and the later Bhanjas of Khinjali. They claim descent, from an ancestor, who was born from an egg. Their inscriptions are no doubt written in Sanskrit, but are full of

inaccuracies, which have prevented a proper assessment of their chronology and historical position. They were unassuming people, since in the records they do not have any vain glorious imperial titles, but, are satisfied with the honorofics of a feudatory, without any insignias of royalty. They occupied the flat country adjoining the hills, assuming independence when chance offered; professing fealty to the supreme power, when the three great divisions were united under some powerful dynasty. They, therefore, ruled over a very extensive area in Orissa and border tracts of Bengal and Bihar and possibly Singhbhum was included in their dominion. The great difficulty, about the genealogy and the chronology of these kings, is lack of authenticated information, but they are gradually taking shape. The Tekkali plates give us a definite date being *Samvat* 800, all other inscriptions are dated in regnal years, like those of the Palas and the Senas.

In the 10th century of the Christian era, Rajendra-Chola the Great invaded Orissa and lower Bengal; his route was through this territory and we may safely assume that Singhbhum being quite near to Benusagar and Mayurbhanj did not escape his attention. The conquest of Rajendra-Chola was, however, not permanent: and Mahipala I of the Pala dynasty was able to establish the second Pala Empire, when this area must have passed into his hands. This is confirmed by the mention of the various feudatories who helped Ramapala, a descendant of Mahipala I, in crushing the *Kaivartta* rebellion in Bengal; and establishing the third Pala Empire. The *Ramacharita* of Sandhyakaranandi gives a list of loyal feudatory princes; and amongst these, is mentioned Lakshmisur of Apara-mandara, who is described as the head of the group of feudatory chiefs of all the forest countries; and whose territory was in the neighbourhood of that of Surapala, ruler of Kujabati, which is about 14 miles north of Naya Dumka in the Santhal Parganas and Rudra-Sikhara ruler of Tailakampa (Telkupi, in the Manbhum district). All these show that Lakshmisura headed all the *Mankis* in the forest tract. He was possibly the medieval chief *Manki*, a custom which was prevalent in Chota-nagpur division during the advent of the British rule in Bihar. It is also possible that his territories included Singhbhum.

The medieval remains in Singhbhum are few and far between, due solely to the lack of proper survey, except that carried on by Mr. J. D. Beglar, during the seasons 1874-75 and 1875-76. Among the sites, most important for studying the culture of the tract in pre-Islamic times, Benusagar comes first. Benisagar or Benusagar is a small village, on the border of the Singhbhum and Mayurbhanj districts of Orissa; situated at a distance of 53 miles from Chaibasa, the district headquarters of Singhbhum. Notwithstanding its location in a remote area, predominantly inhabited by Kols and other aboriginal tribes, the place was able

to attract notice of the archaeologists even in the 19th century. The earliest visitor seems to have been Col. Tickell. Next came Mr. Beglar who visited it twice in 1840 and 1875. The place has since been declared protected under the Ancient Monuments Preservation Act (Act VII of 1904).

The archaeological remains of the place consist of low mounds, ruins of bricks and stone temples, phallus and stone images. The mounds are scattered all over the area, but miscellaneous remains are to be met with at a particular spot, known as 'Devasthan' on the eastern embankment of a large tank, from which the modern village has probably derived its name. The Devasthan is of recent origin. It consists of a low enclosure, constructed with *disjecta* from ruined temples; and a thatched house. In this enclosed area and in its close proximity are to be seen several stone images, some complete and the rest damaged; 8 phallic emblems of Siva and the foundations of four temples, with their remains scattered round them. The building materials were bricks and two kinds of stones : chlorite and laterite.

The Devasthan occupies the main temple site of the place, where the collected *disjecta membra* testify to the existence of at least 4 structures, excluding those which still lie buried under the ground. To the north and the south of this Devasthan, there are small brick mounds, which probably mark the sites of ancient temples. The present Dak Bungalow, standing on the southern side of the tank, was also erected on the site of a temple. Ample evidence, therefore, exists to conclude that the area roundabout the tank possesses ruins of several temples, of which none is surviving to our time, though signs of iconoclastic vandalism are absent. The exact number of the structures cannot be determined, in absence of large scale excavations, but the 8 phallic symbols of Mahadeva possibly indicate the existence of 8 temples. The other miscellaneous images found in the Devasthan area were either decorative elements of the fanes or originally enshrined in the side niches of the temples.

The available evidence, therefore, makes it quite clear that Benusagar was a place of worship for the Saivas, possibly a place *Ashta-Sambhu*. That the number of *Sambhus* might have been increased to infinite in later times is also probable. In medieval eastern India, a practice had grown up to establish places of worship, with 8 phallic emblems of Siva-Mahadeva; and several places shared this feature with Benusagar. These are Bhubaneshwar in Orissa, Kiching in the Mayurbhanj district, a place only five miles to the south of Benusagar, Khekparta near Lohardaga in the district of Ranchi. Since, none of the temples have survived, it is difficult to opine about the style of temple architecture that was prevalent at Benusagar; but, the examples of such places, as Khiching and Ranipur-Jural, possibly indicate

that they followed the *Nagara* style of temple architecture; or according to the Orissa canon *Rekha* type of temples. Hypothetically, we may be permitted to assume that the temples at Benusagar belong to two distinct epochs. The first between 8th or 9th century A. D., when the Palas under Dharmapala and Devapala established the Pala empire from Kanauj up to the sea coast; and the second from 10th or 11th century A. D. when the second Pala empire was established by Mahipala I. According to tradition, the tank at Benusagar was excavated by Raja Benu, son of Raja Keshna of Kesnagarh. Kesnagarh with the ruins of a fort was visited by Mr. Beglar, but no object of special interest is reported to have been found by him.*

Along with Benusagar, there are several other sites which were visited by Mr. Beglar. Lalgarh is supposed to be without any ruins worth attention by the archaeologists; but Dipadi, in the old Sirguja district, is said to contain numerous temples. Deogam is said to contain sculptures and temples. Gulka is the place where Roman coins, already referred to, were found. Damdama also contains several mounds, yielding 18″ bricks; and last but not the least is Kichang or Kuchang in Seraikela. This is a very large village, near the junction of the Kairabandhana and Kantakara rivers. The ruins are situated all round it, but, chiefly at the eastern end, just outside the village. The remains on the west and south are heaps of stones and bricks. In a ruin, to the west, are stone pillars, reminiscent of the pillar in Barhut sculptures, though undoubtedly they belong to a later period. The caps of these pillars too are supposed to be derived from those of Emperor Asoka. In other words they were probably fluted pillars with a foliated capital. The pillars are of two sizes, four large and several small, indicating the existence of a lofty *Mandapa* with chapels or *Ardha-Mandapas*. Not far from this mound, is another small one, representing the ruins of another small shrine. Half a mile to the south-east of these, is a mound, representing the ruins of several brick and stone temples (bricks measure 12″×9″×3″). Half a mile to the east by little south of the village is another stone temple, not quite ruined, erected about a century ago. It was one cell *Rekha* temple, of the Barakar type. It had a sculptured door frame for its sanctum. But the last but not the least, is the group near the village. One of these fanes was Saivite and faced south-east. The type is again that of Barakar, but, the lower part of the *Sikhara* was sculptured but the upper part was quite plain, possibly indicating repairs at a subsequent date. One of these temples was an unfinished one, which was extremely instructive, regarding the methods of construction and finishing. Close to the groups were several other little mounds, Buddhist and Brahminical images

* *Archaeological Survey Report*, XIII, p. 71.

remarkable for their excellence of execution. Many of these Brahminical images are erotic in character. The local tradition assigns these temples to King Sasanka of Gauda and Karusha.

Muslim Period.

There are neither reliable Muslim remains nor records that can establish Mohammadan conquest of Singhbhum. To the Mohammadan historians the whole of modern Chotanagpur and the adjoining hill states were known by the name of Jharkhand or forest country. It appears to have remained independent throughout the Turco-Afghan period (1206-1526 A. D.) in India. The early Delhi Sultans generally attempted to conquer the accessible parts and stationed their *Subadars* and garrisons in cities and strategic centres.

Tarikh-i-Firuz-Shahi of Shams-i-Siraj tells us that Sultan Firuz Tughlaq, after his second campaign against Bengal (1359-1360 A.D.), marched from Jaunpur against the Rai of Jajnager (modern Orissa) and after making peace with him returned by some route through Jharkhand*. From the *Chaitanya Charitamrita* we learn that Sri Chaitanya, the Vaisnava reformer and devotee of Nadia in Bengal (c. 1485 A.D.), on the way to Mathura in the second decade of the 16th century A.D., passed through Jharkhand and made conversions among the aboriginal population. It is also said that Shershah passed through Jharkhand while returning from his second attack on Gaur in 1538 A. D.†

The accession of Akbar to the throne of Delhi in 1556 A.D. is a landmark in the history of Jharkhand or Jungle country. To the Mughals it was known as Kukrah. It excited the cupidity of the Mughal Emperors by the reason of the report of the diamonds to be found in its rivers. The river Subarnarekha, which means streaks of gold, and gold is still said to be found in small quantity in its sands, must have been known to the Mughals. Akbar in 1585 A.D. sent an expedition commanded by Shahabaz Khan Turbati who reduced the Raja of Chotanagpur to the position of a tributary. In 1591 A.D. this Raja took part in the Mughal expedition to Orissa. During the campaign against the rebellious Afghan chiefs of Orissa in 1591-92 A.D., Man Singh joined the armies of Bihar and Bengal and started by the water route (? sea) while many others advanced by way of Jharkhand under Yusuf Khan Chakk, the former king of Kashmir‡. Said Khan of Bengal joined Man Singh later on. The engagement took place at Malanpur, which according to Beams

---

* Quanungo's *Shershah*, p. 174.

† *Tarikh-i-Firus Shahi*, Bibilotheca Indica, edition, pp. 163-164, quoted in *Bengal Past and Present*, Vol. XXX, p. 18.

‡ R. D. Banerji's *History of Orissa*, Vol. II, p. 8.

is on the Subarnarekha. It is mentioned in the *Ain-i-Akbari* that Chotanagpur or Kukrah was included in the Subah of Bihar. It is said that the ancestors of the Raja of Porahat were three brothers in the bodyguard of Akbar's general Man Singh, who took the part of the Bhuiyas against the Hos and ended by conquering the country for themselves*.

In 1616 A.D., Ibrahim Khan Fateh Jung, the brother of Queen Nurjahan, and the then Governor of Bihar, under Jahangir invaded Kukrah which had, it seems regained independence during the disturbance that followed the death of Akbar in 1605 A.D., defeated and captured Durjan Sal, the 46th Raja of Chotanagpur who was deprived of his riches and later on imprisoned in the fort of Gwalior for twelve years, at the end of which his success in distinguishing a real from a false diamond was rewarded with his release and restoration of his former dignity. The annual tribute to be paid by him was fixed at Rs. 6,000. In 1632 A.D. Chotanagpur was given out as a *Jagir* to the Governor at Patna in return for an annual payment of Rs. 1,36,000. This was raised to 1,61,000 in 1636 A.D.

In the reign of Muhammad Shah (1719-1748 A.D.) in 1724 A.D. Sarbuland Khan, the Governor of Bihar, led a campaign against the Raja of Chotanagpur and obtained his submission and he returned with a huge amount in cash and diamonds. In 1731 A.D. Fakruddaula, the then Governor of Bihar, led a punitive expedition against the Raja for non-payment of tributes. In 1735 A.D., Alivardi Khan with some difficulty enforced this payment and it was continued till the British occupied the country.†

The complete disintegration of Mughal Empire had been reached. In 1742, the Maratha nemesis overwhelmed Bengal, Bihar, and Orissa and their inroads became a common feature. The contemporary narratives the *Sair-ul-Mutakharin* and *Riyaz-us-Salatin* throw ample light on the history of the period under review. It is stated that Bhaskar Pandit, the general of the Maratha army, entered Chotanagpur through Chattisgadh and fell upon the Midnapore district through Mayurbhanj and Pachet‡.

Hos.

The Hos are believed to have migrated from the Chotanagpur plateau and overcome the Bhuiyas, who then held part of Singhbhum. They found a hilly fastness in the south of the district, where they successfully maintained their independence,

* *District Gazetteer* (1910), p. 26.

† *Minute of April*, 1832, written by Mr. Thompson, Deputy Secretary to Government, mentioned in Mr. S. C. Roy's book *Mundas and Their Country*, p. 161.

‡ *Marathi Riyasat, Madhya Bibhag*, Part II, pp. 483—85, quoted in R. D. Banerji's *History of Orissa*, Vol. II, p. 91.

their military prowess earning for them the sobriquet of Larka Kols, that is, the fighting Kols. The north of the district came under the rule of the Singh family of Porahat, who claim to be Rathor Rajputs and whose head was formerly known as the Raja of Singhbhum. At one time the Singh Rajas also ruled over the country now included in the States of Seraikela and Kharsawan, and claimed suzerainty over the Kolhan, a claim, however, which the Hos denied. According to Colonel Dalton, old Hos told him that they honoured and respected the Singh chiefs, but regarded them, till they quarrelled, rather as friends and allies than as rulers. Even if they ever were subjects, they had achieved their liberty in various hard-fought fields*.

Three formidable but abortive attempts to subjugate them have been recorded—one made by Dripnath Sahi, the Raja of Chotanagpur, at the head of more than 20,000 men, assisted by the troops of the Raja of Singhbhum; the second by Raja Jagannath Sahi of Chotanagpur, with almost an equal force, in 1770; and a third in 1800 an invasion from the Mayurbhanj side, headed by a chief called the Mahpatra of Bamanghati. On the first of these occasions the Hos drove their assailants out of Singhbhum with immense slaughter. The second invasion was no more successful. The Raja's troops succumbed to the first onslaught of the Hos; many hundreds were slaughtered on the battlefield, and many more were killed or died from thirst in the retreat, for the action was fought at noon in the intense heat of May. The Hos pursued the remainder for ten miles, till the fugitives had surmounted the steep ascent into their own country. The Hos retaliated on the border villages in Chotanagpur; and also laid waste the adjoining portions of Gangpur, Bonai, Keonjhar and Mayurbhanj, some of the raids being instigated by the Porahat Rajas. It was usual, indeed for those chiefs, when they wished to annoy a neighbour, to incite the Hos to make a raid on him. "These", says Colonel Dalton, "were, I think the only invitation of the Singhbhum chiefs that they ever attended to. Whenever there was a row, they eagerly entered into it, and all malcontents invariably sought their assistance."

Some authorities are of opinion that the Hos owing to their military prowess maintained their independence in the wake of Muslim conquest, by whom the whole of their country was included in the vast unexplored tract, called Jharkhand which stretched from Rohtasgarh to the frontier of Orissa.

BRITISH PERIOD.

British relation with Dhalbhum.

British relations with Singhbhum date from 1765, when a punitive British force marched against the then Raja of Dhalbhum,

* *Dalton's Ethnology of Bengal.*

or as he was called in the early records of Midnapore, the Raja of Ghatsila. The district of Midnapore had been ceded to the British, in 1760, and great difficulty was, at first, experienced in reducing the spirit of independence of the chiefs of the hilly country to the west and in stopping their predatory raids. In 1760, the Resident of Midnapore sent an ensign, named John Fergusson, against them with a few companies of sepoys. He soon succeeded in obtaining the submission of the zamindars to the west of Midnapore, of Chatna, Supur and Ambikanagar in Bankura and of Barabhum in Manbhum. The zamindar of Dhalbhum, however, held out, and barricading the passes, prepared for resistance. In the middle of March, 1767, Fergusson began his march from Jambuni to Ghatsila and found his advance opposed by a force of 2,000 men armed with arrows, swords and spears who had erected a barricade of "palisadoes" near Bend. The position was carried without loss, and the enemy driven out of the jungle. Next day, they again tried to attack, but were kept off by "seven rounds of grape, and two or three platoons from the sepoys". After this, the Raja's levies did not venture to come to close quarters or to make a stand, but hung on the flanks of the small British force. Fergusson, therefore, had to keep up a running fight till he reached his camp at Chakulia. The same tactics were repeated throughout the march and Fergusson had to fight his way for 32 miles through thick jungle.

On the 22nd March, 1767, he reached Ghatsila to find the enemy had abandoned and fired the fort following a scorched earth policv (apparently Narsinghgarh). The troops, however, were able to save some grain from the flames, or the expedition would have had to be abandoned, for the enemy had burnt their villages as Fergusson advanced and he had been able to get no supplies. Fergusson next sent out a detachment which succeeded in capturing the Raja, who was sent down a prisoner to Midnapore; and his nephew, Jagannath Dhal, was installed in his stead on promising to pay a yearly revenue of Rs. 5,500. After this, Fergusson marched away to Balrampur. In August, 1767, he had to return. The new zamindar was ordered to capture a petty chief of Dhalbhum, who was at the head of a league of resisters; and since he failed to do so, or to obey a summons calling him to Balrampur, Fergusson marched against him with two companies and seized his fort. Jagannath Dhal fled to the jungle, but soon surrendered himself and was forgiven.

But Singhbhum was far from subdued and in 1768, there was fresh trouble. The Raja fell into arrears, constantly evaded compliance with the Resident's command, and was apparently concerting measures to regain his independence. Lt. Rooke, with two companies of sepoys, was sent to re-establish the authority of the British; but failed to secure the Raja, though

he captured his brother Nimu Dhal. In July, Rooke was relieved by Captain Morgan, who found the country up in arms; the Raja being supported by all the zamindars and the fort of Narsinghgarh untenable. Morgan was directed to appoint Nimu Dhal in the place of Jagannath Dhal, and this was done, though the new Raja had not even clothes to cover him. "Now that we have a new Rajah", wrote Morgan, "John Company must supply him with money and victuals, for he has the least of either............... He is wretchedly poor. I think you should send him a present of some pieces of cloth and some silks or he cuts a most woeful figure for a Rajah."

Morgan, it is clear, disliked his task intensely. The rebels did not gather in any force, but lurked in small bands in the jungle, never coming to close quarters :—"It is all a joke, to talk of licking these jungle fellows. They have not the least idea of fighting; they are like a parcel of wasps: they endeavour to sting you with their arrows and then fly off. It is impossible almost to kill any of them, as they always keep at a great distance and fling their arrows at you, which, you may suppose, seldom or ever do any execution. To tell you my real sentiments of the affairs of this country at present, I think it will be a more difficult job to settle it than it was at first to conquer it. The disaffected have now a young man to head them who never stays long in any particular place; consequently it will be more difficult to lay hold of him, than it was to catch the old Raja, who was a fool enough to stay in this fort, till Fergusson came here. I wish to God, this business was over, for I am really tired of doing nothing, and my poor sepoys fall sick continually. I have now above sixty men ill of fever". He added—"I will lose no time in pursuing Jagannath Dhal. The consequence of it will be that all the people of the country will run to the devil, and the country cannot possibly be settled for many months; but what can I do with the rascals when they neither come in nor answer my purwannahs".

To add to Morgan's difficulties, the people refused to supply him with provisions. At one time, he writes that he will have to leave the fort to get food; at another—"For God's sake send me a supply of fowls by the return of the daks, for I have nothing to eat". The rains, moreover, had broken, and as the rivers were all swollen and he had no boats, he was shut up in the fort at Narsinghgarh, and his men were reduced to a seer of rice daily. At last in August, 1768, he managed to cross the Subarnarekha in a boat which "leaked confoundedly", and set out to Haldipokhar (Haludpukhur) in pursuit of Jagannath Dhal. There we find him complaining of being encamped in a bog, with his men falling sick "in the shockingest weather he ever saw in his life", and appealing for a strong supply of madeira,

brandy and butter. He succeeded, however, in getting the *sardars* to come in; and in September the Resident reported that Ghatsila was "entirely settled, and the business going on in a proper channel".

Next year (1769), the Chuars or Bhumij resumed their predatory raids, a body of 5,000 invading Dhalbhum and forcing the new Raja to retire to the fort of Narsinghgarh, with a small body of the Company's sepoys. They were soon, however, expelled by a punitive expedition, sent from Midnapore, under Captain Forbes, who then retired, leaving a small party of sepoys at Kuchang. As soon as he was gone, the sepoys were treacherously cut off. Lieutenant Goodyear was then sent, with two companies of sepoys to Kuchang, to take possession of the country, to collect rents on the Company's account, and if possible, to arrest and send to Midnapore the zamindar, his brother, and any others concerned in the death of the sepoys. The idea of annexing Kuchang was, however, given up, as being an encroachment on the rights of the independent Raja of Mayurbhanj, who appointed the zamindars both of Kuchang and Bamanghati. He was induced to depose the former and to give Kuchang to the zamindar of Bamanghati, while the Company decided to have nothing further to do with Kuchang. The zamindar was, however, required to obey whatever orders he received from the Resident at Midnapore, and he was to be answerable for all disturbances or raids on the Company's territory. If he did not abide by this agreement he was to be turned out, not only from Kuchang but also from Bamanghati.

In 1773, fresh disturbances broke out, Jagannath Dhal gathering his partisans attacked his successor, Baikuntha Dhal, with a large force. Such disturbances were no new feature, as the Resident at Midnapore reported to Warren Hastings:—"As soon as the harvest is gathered in, they carry their grain to the tops of the hills, or lodge it in other fastnesses that are impregnable; so that whenever they are pursued by a superior force they retire to these places, where they are quite secure, and bid defiance to any attack that can be made against them. The zamindars are mere freebooters, who plunder their neighbours and one another, and their tenants are a banditti whom they chiefly employ in their outrages. These depredations keep the zamindars and their tenants constantly on arms. For, after the harvest is gathered in, there is scarcely one of them who does not call his ryots to his standard, either to defend his own property, or to attack his neighbours. The effects of this, I may say, feudal anarchy, are that the revenue is very precarious, the zamindars are refractory, and the inhabitants rude and ungovernable". This year, the disturbances were on a larger scale than usual, and Captain Forbes had to be sent with a force of sepoys to reinforce the Raja and restore order; and when he

had done so, two companies were left at Narsinghgarh and Haludpukhur to preserve the peace.

Next year, the Chuars again broke out under Jagannath Dhal. All the villages were burnt or totally deserted from Baharagora as far as Narsinghgarh, and even beyond it, to within a mile or two of Haludpukhar. The Lieutenant in command writing in April, 1774, asked for reinforcements and permission to make reprisal on this insolent Raja, adding:—"As these people are under the most terrible apprehensions from the effects of a gun, if one was sent, it would be of infinite service". The gun, however, was apparently not sent, for next month he reported that he was informed that"the hill fellows in the whole environs have agreed to join Jagannath Dhal, or act in concert with him, to drive our sepoys out of every part of the country. Though I lay very little stress on this last advice, my ammunition is so much exposed, that two or three enterprising fellows in a dark night might destroy it, notwithstanding the utmost diligence of the sentries—in which case, this detachment must be cut off, for these people, being as brave as our sepoys, their numbers must prevail, when they cannot be kept at a distance, their arrows being as superior to bayonets as muskets are to arrows. Unless Jagannath Dhal is subdued, the Hon'ble Company can never receive an anna from this side of the Subarnarekha river, but when sepoys are stationed here; as he tells me under his hand, in answer to a message I sent him, that he ought to be Raja, and that till he is, he will never cease destroying this country with fire and sword"*. Eventually in 1777 Jagannath Dhal was reinstated in the estate on agreeing to pay a revenue of Rs. 2,000 for the first year, Rs. 3,000 for the second year and Rs. 4,000 for the third year; and in 1800 the estate was permanently settled at an assessment of Rs. 4,267.

Apart from political settlement in 1800 with the British Government, the year coincided with the extension of Permanent Settlement to Dhalbhum. At that time it formed part of Midnapore but in 1833 it was transferred to Manbhum and in 1846 to Singhbhum.

Early relation with Porahat.

In a lengthy despatch to R. D. Mangles, Secretary to Government, Fort William, dated 22nd August, 1836, T. Wilkinson, Governor-General's Agent, provides an account of the state of affairs prevailing in Singhbhum and the four contiguous Kol *Pirs* of Bamanghati. Beginning with a short account of the topography of Singhbhum, Wilkinson has narrated the circumstances which led to form relations with Singhbhum and the events which

* This account of the early history of Dhalbhum has been compiled from Mr. J. C. Price's *Notes on the History of Midnapore.*

subsequently occurred not only in Singhbhum but Bamanghati up to the date when the despatch was composed.

"Singhbhum could never be brought under subjection by the Muslim rulers of India and neither could the Marathas take possession nor collect *chouth* from it. For several years previously to A. D. 1818, Singhbhum was an asylum for fugitive offenders from the bordering districts of Chotanagpur, Tamar, Patkum, Burrabhum and Dhalbhum and plundering excursions were frequently made by large bodies of Larka Kols into Chotanagpur, Gangpur, Bonai, Keonjhar and Mayurbhanj and owing to these circumstances the Government became cautious to form relation with Singhbhum".

"The whole of the country of Singhbhum was nominally subject to a Raja who resided at Porahat. The Kuer of Seraikela and the Thakurai of Kharsawan had for years, preceding 1818, became quite independent of him, and had succeeded by force and other means to get into their possession in addition to which they originally received from the Singhbhum Raja, extensive tracts of land, which formerly belonged to the estates of Rajas of Tamar, Patkum, Barabhum and Mayurbhanj. The first expedition against Dhalbhum brought the British into contact with the Raja of Porahat, or as he was then called, the Raja of Singhbhum. The Raja at that time (1767) was Jagannath Singh who seeing the success of the British, thought it a favourable opportunity to make overtures to them, especially as he was kept in confinement by his cousin. He, accordingly, sent an emissary begging for the Company's assistance; and asking that he might put his territories under their protection and pay them an annual revenue. Regarding this proposal, George Vansittart, the Resident of Midnapore, wrote in December, 1767 to Verelst, then head of the Government in Calcutta". "Singhbhum formerly contained nearly 14,000 villages, but only 500 are at present in the Raja's possession; of the others some are gone to ruin, and the rest are in the hands of the Kols, a tribe of plundering banditti. The Raja is by marriage a distant relation of the Sambalpur Raja; there is a constant correspondence between the two districts and an uninterrupted intercourse of merchants. They are situated from each other about 90 *kos*, and there is a tolerable good road the whole way between them. Singhbhum was never reduced under the dominions of the Mughals, but has for 52 generations been an independent district in the possession of the present family. If you approve of taking the country under the Company's protection, four companies of sepoys, I believe, will be quite a sufficient force and it will probably open an easy intercourse with Sambalpur."

As a result of this representation, we find that in January 1768 the Collector-General recommended Mr. Vansittart to send an intelligent person to Singhbhum to acquire a knowledge of the country, the strength of the fortresses, and particularly to find out whether the Marathas had any claim or ever had any pretensions to the country. This point was to be cleared up before any troops were ordered to march into it, as the existing state of the Company's affairs would not allow of their engaging in any disputes with the Marathas. Accordingly, two sepoys were sent to explore Singhbhum, but were forced to return, not having been allowed to proceed more than a *kos* or two beyond the frontier. They ascertained, however, that the Raja, Jagannath Singh, was in the power of his cousin Sheonath Singh; Purihati (Porahat) was the residence of the Raja, and the jurisdiction of the Marathas had never extended to Singhbhum, nor did they receive the smallest revenue from it. The subject was eventually disposed of in the following words by Mr. Verelst:—"As I hope soon to gain possession of Cuttack, I would rather choose to defer taking any measures regarding Singhbhum till that time."*

Seven years later (in 1773) Captain Forbes took advantage of his expedition to Dhalbhum to bring the Raja to book. It had for some time been the practice of salt merchant to get salt from Orissa (then in possession of the Marathas), instead of from Midnapore, and to transport it through Singhbhum where the Company's writ did not run, thus diminishing its revenues. It was now discovered that the Raja had encouraged this practice, which was looked on as smuggling. Captain Forbes, therefore, forced the Raja to come to his camp, and reported that he would "make him execute an obligation never to harbour either ryots or merchants in future, and guarantee for the peace of Haldipokhar."† Subsequently in 1793, the two neighbouing chiefs, the Thakur of Kharsawan and the Kuer of Seraikela, were compelled to enter into similar engagements regarding the reception of fugitive rebels from British territories.

In 1803, war was declared against the Marathas and the Governor-General, Lord Wellesley, invited the Kuer of Seraikela to render assistance against them, assuring him that the British Government would respect his right to hold his territory free of revenue. No attempt appears, however, to have been made to enter into closer relations with the chiefs of Singhbhum, and the interior remained a closed land. The Hos would allow no strangers to settle in, or even to pass through, the Kolhan; and pilgrims to Jagannath had to make a circuit of several days' journey to avoid it.

---

* J. C. Price's *Notes on the History of Midnapore* (1876), pp. 53, 54, 55.

† *Ibid*, pp. 116, 184-5.

In 1819, the Political Agent, Major Roughsedge, directed his assistant Lieutenant Ruddei to negotiate with the Raja of Singhbhum. The latter was unwilling to accede to the terms proposed, negotiations were broken off. In September of the same year, owing to disturbance in Tamar occasioned by the turbulent *jagirdars*, the expediency of renewing negotiations with Singhbhum was submitted to the considerations of Government and in October, 1819 the sanction of Government to renew the negotiation was communicated to the Political Agent.

By the 16th January, 1820 the lord of Seraikela and Thakurai of Kharsawan willingly agreed to place themselves under the protection of the British Government and before the 1st of February, Raja Ghansham Singh of Porahat followed suit, agreeing to pay an annual tribute of 101 *sikka* rupees.

In course of his engagements, the Raja of Singhbhum had expressed his hope that the Government would assist him (*i*) in recovering from the Seraikela Kumar, his household image (Pauri Devi) which had some generations before been carried off by the Kumar of Seraikela; (*ii*) in establishing his authority over certain *taluks* of which he had been forcibly deprived by the Seraikela prince and Kharsawan Thakurai; and (*iii*) in checking the inroads and reducing to subjection the Larka Kols, who were in possession of by far the greatest portion of his country.

Major Roughsedge promised the Raja of his assistance, for the attainment of the first and the third of the objects solicited, but intimated to him that he was bound to observe certain principles which would preclude his affording assistance for the accomplishment of the second.

After Major Roughsedge had completed his arrangements with the Singhbhum Chiefs and tranquility had been restored in Tamar, he entered Singhbhum, and accompanied by the Raja and Babus, proceeded to Seraikela and persuaded Bikram Singh, the ruler of Seraikela, to restore the Pauri Devi to the Raja, but without success. In March, 1820 he left Seraikela accompanied by the Raja and several Babus, and commenced his march towards Sambalpur passing directly through the Kol *Pirs* from north to south. He had with him the Ramgarh Battalion and some irregular horse.

The Kol *Pirs* traversed were Adjoodea, Raja Basa, Goomla and Jaintgarh; in his progress, he was driven into hostilities with the Larka Kols, in the first instance, by the treacherous conduct of the Larkas of Raja Basa *Pir* and was subsequently under the necessity of attacking the Kols of Bembea, in the neighbourhood of Jaintgarh, on which occasion few lives were lost by the Kols and the troops were much harassed, owing to the advanced state of the season. Major Roughsedge without having

been able to induce the southern Kols to submit, deemed it advisable to take the Ramgarh Battalion into cantonment at Sambalpur. Before leaving Singhbhum, he pointed out to Raja Ghansham Singh, the advantage of establishing a *thana* at Jaintgarh of 100 well-armed Barkandazes and offered to procure them for him from Sambalpur. The Raja expressed a desire to have the Barkandazes and they were accordingly sent, under a Subadar named Buoran Singh, to the Raja of Porahat.

On the 17th February, 1821 Major Roughsedge reported to Government that the hundred Barkandazes, sort of local levies or yeomans sent to the Singhbhum Raja from Sambalpur had been attacked by the Larkas, first in Goomla *Pir*, and subsequently in Chainpur on which occasions the Barkandazes had been defeated with seven loss amongst whom was the Subadar. On this occasion the Kuer of Seraikela afforded shelter to the fugitive Barkandazes and promptly reinforced the garrison of Chainpur with his armed retainers.

Under the circumstances it was deemed necessary to send a considerable force, which under the command of Colonel Richards entered Singhbhum. The Ho leaders after a month's hostilities and encouraged by a proclamation, surrendered. They earnestly prayed at this time to be taken under the direct rule of the British, but unfortunately their wishes were not complied with, and they were compelled to enter into agreements to pay tribute to the chiefs. The following are the terms of agreement:—(1) We acknowledge ourselves to be subject to the British Government and engage to be loyal and obedient to its authority. (2) We agree to pay to our chief or zamindar 8 annas for each plough for the five years next ensuing and afterwards one rupee if our circumstances admit it. (3) We engage to keep the road through our *parganas* open and safe for all descriptions of travellers, and if robbery takes place, to deliver the thief to justice and account for the property stolen. (4) We will allow persons of all castes to settle in our villages and afford them protection; we will also encourage our children to learn the Oriya or Hindi tongue. (5) If we should be oppressed by our chiefs or zamindars, we will not resort to arms for redress, but complain to officers commanding the troops on our frontier or to some competent authority".

Detachments of troops were posted at Kutkurinjah in Keonjhar, to the south and bordering on Singhbhum at Boerda in Bamanghati and at Chakradharpur. These guards were intended as a check on the Hos and to prevent the zamindars making exactions from or otherwise oppressing them.

After the completion of these arrangements Major Roughsedge returned to Sambhalpur, and in January, 1822 died of fever. Colonel Gilbert who succeeded Major Roughsedge made a tour

through Singhbhum in 1823 and found the Hos both in Singhbhum and Bamanghati peaceful. He now proceeded to put to action, the commitment made by his predecessor, regarding the restoration of Pauri Devi to the Raja of Porahat from Seraikela. In consequence of his representation, the Government intimated to the Kumar of Seraikela that the latter should restore the Pauri Devi to the Raja. The Kumar evading compliance, Colonel Gilbert marched with the Ramgarh Battalion to Seraikela and on the 8th of March, a party of the Battalion entered Kumar's house and without opposition was allowed to bring away the image, which was restored to Raja Ghansham Singh.

From 1824 to 1830 nothing of consequence occurred in Singhbhum. In May, when Wilkinson reached Hazaribagh to assume charge of the Agency, he found that the Hos of Jaintgarh and Beradia *Pirs* in the south of Singhbhum had risen against Ragunath Bisi, the chief of Jaintgarh, and plundered not only the whole of his property, but drove him out of the country. The Larkas were headed by Matha Munda of Bendia and Joomal Munda, the son of Sultan, who had in 1822 been seized by Bisi, sent to Sambhalpur, and died on the road. The causes assigned for the outrages committed were that the Bisi had in 1822 apprehended Joomal's father and that he had oppressed the Hos. There were also strong reasons to suspect that the Raja of Singhbhum had intimated the Hos that he would be well pleased if they would attack and turn the Bisi out of Jaintgarh. No attempt was made to restore order or seriously to check the predatory predilections of the Hos.

KOL REBELLION.

In 1831 the Hos joined the rebellion (commonly called the Kol rebellion) of the Mundas of Chotanagpur. There had long been smouldering discontent among the latter, owing to the way in which their villages were granted away to foreign farmers in supersession of their headmen. The explosion was acutally occasioned by the treatment of the Mundas resident in or to the north of Singhbhum. Harnath Sahi, the brother of the Maharaja of Chotanagpur, gave farms of some of the villagers in his estate to personal favourites, Muhammadans, Sikhs and others, in utter disregard of their ancestral occupants. Twelve villages bordering on Singhbhum which had been held by a *manki* called Singrai, were thus given to the Sikhs. Not only was the *manki* dispossessed, but two of his sisters were seduced. A similar complaint was made against the Muhammadan farmers. One of them acted very oppressively towards one Surga, a Munda, of Bandgaon in Singhbhum, and it was said, had abducted his wife. The two aggrieved men, with others smarting under their treatment, called together the Mundas of Bandagaon and the adjoining tracts in Ranchi and resolved to burn, plunder and murder. This was

no vain threat. A few weeks later a body of 700 men headed by Surga and Singrai plundered and burnt the villages from which Singrai had been ejected; and next month sacked the village of Jafar Ali, the seducer of Surga's wife, murdering him, ten of his people, and the unfortunate woman.

The Munda population on the borders of the Ranchi and Singhbhum districts rose *en masse,* the Hos of Singhbhum coming to their aid in defence of human rights and forming the most formidable division of the rebel army. The insurrection quickly spread over practically the whole of the present district of Ranchi and overflowed into Hazaribagh, the Tori *pargana* of Palamau, and the western portion of Manbhum. The insurgents carried fire and sword from village to village, ruthlessly butchering every Hindu and non-aboriginal they could lay hands on, burning their houses and looting their property. To put down the rebellion, military operations on an extensive scale were found necessary. The only local body of troops at the time consisted of the Ramgarh Battalion which was stationed at Hazaribagh. They immediately took the field and were reinforced as speedily as possible by troops from Barrackpore and Dinapore; and by the 50th Bengal Infantry, which was on its march through from Gorakhpur. Different parties of the marauders, sometimes numbering several thousands, were successively met and routed, though not without loss from wounds by axes and arrows. In several instances, indeed, the insurgents showed extreme courage, in themselves making the attack, and it was necessary more than once to bring artillery into action before they could be driven out of some of their fastnesses. Operations had to be continued for over two months, during which many hundreds of the insurgents were butchered in action, before the rebellion was finally quelled. Surga and Singrai's brother, the heroes of the rising, held out to the last, but surrendered in March, 1832. Their example being followed the insurrection came to an end. But no memorial marks the field of battles or the places where they met supreme punishment for having the courage to make a stand for their birth rights, their land, liberties of their people and sanctity of their women.

The Kol revolt was indeed a national movement of the aboriginals. It had more right to be regarded as a freedom struggle by the half civilized jungle folks than the movement of 1857. It was a widespread revolt of different sections of aboriginal people in Singhbhum, Chotanagpur and the adjoining territories as a protest against the inequities, inefficiency and maladministration by the British.

In 1821 four of the five *Pirs* in the Bamanghati Subdivision of that State had been forcibly annexed by the British Company and now formed into the district of Singhbhum in Bihar. These four *Pirs* were entirely inhabited by Kols and therefore the local

name for this territory was Kolhan. The remaining *Pir* remained under the Mayurbhanj State subject to the control of the Commissioner of Katak (Cuttack) in his capacity of Superintendent of Tributary Mahals in Orissa. There was one *Sarbarahkar* in charge of all the five *Pirs*. The four *Pirs* of Tai, Bharbharya, Aula and Lalgadh being in British territory the *Sarbarahkar* now imagined himself to be independent of the Raja of Mayurbhanj and owing obedience only to the Agent to the Governor-General on the south-western frontier at Hazaribagh, in spite of the fact that he still held land within the Mayurbhanj State. The *Sarbarahkar* had evidently gained over Captain Wilkinson, who recommended the transfer of the entire Bamanghati tenure to the Commissioner of Orissa. On the 3rd April, 1832 the *Sarbarahkar* rebelled against the Raja and burnt some villages on the great southern road from Calcutta to Nagpur, which passed through Medinipur and Sambalpur. The Company's Government received a report from Mr. Stockwell, Commissioner of Katak, on the 6th April, stating that the latter had summoned both Raja Jadunath Bhanja and the *Sarbarahkar* of Bamanghati in order to effect a reconciliation between them. Both parties attended on the Commissioner at Balasore, from January to the 11th of March, who decided that Raja Jadunath Bhanja had a right to remove the *Sarbarahkar* or to modify and change the circumstances of his tenure. The second decision of the Commissioner is more important for the history of Feudatory Chiefs in Orissa. Mr. Stockwell states as his second conclusion "that it was a case of internal management and arrangements of that nature with which the Government desired that there should be no interference, and that the *Sarbarahkar* as vassal must submit to and abide by the orders of his feudal chieftain". It is, therefore, absolutely clear that following the Maratha system of non-interference with the internal affairs of a feudatory state the British Company's Government even in 1832 did not want to meddle between Raja Jadunath Bhanja and his subordinate of Bamanghati. The *Sarbarahkar* was directed by Stockwell to wait upon Raja Jadunath Bhanja and settle with him the terms for the future, more specially on the point of doing homage to his chieftain, but the latter vanished during the night. Raja Jadunath Bhanja was not competent to deal with the *Sarbarahkar* and so Stockwell marched to Bamanghati with a company of the 47th Native Infantry. The Government ordered troops at Medinipur to be ready but Stockwell was informed that the Government did not propose to order the regiment at Medinipur to march immediately. On the 14th April, Stockwell replied that the five *Pirs* should be rendered entirely independent of the Raja and his *Sarbarahkar* and placed under some Kol chief who possessed sufficient influence. The *Sarbarahkar* opposed Stockwell's advance and the latter was compelled to call on the Officer Commanding at Medinipur to advance with all troops available. On the 15th a foraging

party of British troops was attacked and plundered and Stockwell retired towards Bangirimusi. He was again attacked and a Havildar killed and two sepoys wounded in this action. Stockwell now applied for re-inforcements from Chotanagpur. He reached Bamanghati on the 10th May with the troops from Medinipur after meeting with some opposition. On the 15th May, he reported to the Government that he did not require the co-operation of any troops from Chotanagpur. In the meanwhile, Captain Wilkinson arranged terms with the *Sarbarahkar* by promising him continued possession of his tenure and a full enquiry into the causes of his dispute with the Raja of Mayurbhanj on condition of his ceasing hostilities and going to Captain Wilkinson. The *Parwanah* was received by the *Sarbarahkar*, Madhavdas, but a violent sickness broke out among the troops, which compelled Stockwell to abandon the Bamanghati country. He found out that the intention of Madhavdas *Sarbarahkar* was to render himself completely independent of any controlling power. A meeting of the inhabitants of Bamanghati was held and Stockwell reported on the 22nd of May that he had decided to withdraw the troops into cantonment at Medinipur. Lieutenant-Colonel Doveton, Ensign Manningford and Sergeant James Mc-Maera died at Bamanghati with twelve sepoys of fever alone. On the 26th May Madhavdas reached Captain Wilkinson and the Government ordered his restoration. He was ordered to pay the due tribute to the Raja of Mayurbhanj. The five *Pirs* were placed under Captain Wilkinson through whom the tribute was to be paid. The Government having decided on the full restoration of the guilty Madhavdas, Stockwell resigned by way of protest against the injustice done towards him and the Raja of Mayurbhanj.

It appears from another despatch to the Court of Directors, dated the 6th September, 1836, that Madhavdas *Sarbarahkar* was a *Mahapatra* in rank. Ajumber Singh, the Kumar of Seraikela, was a party in the dispute and Raja Jadunath Bhanja stated that the Kumar was actually assisting the Kols. Mr. Ricketts, the successor of Stockwell, suggested that Raja Jadunath Bhanja should be maintained in his present position and supplied with arms and ammunition on promising not to molest the Kumar of Seraikela, that the Kumar should be assured of protection on condition of his not aiding and abetting Madhavdas *Mahapatra*, and finally, that he could persuade Raja Jaduanth Bhanja to make a suitable provision for Madhavdas. Captain Wilkinson was assured by the Kumar that he had not aided Madhavdas and reported that Raja Jadunath Bhanja and the Raja of Singhbhum intended to attack the State of Kharsawan. The Government warned the Kumar of Seraikela about assistance given by him to Madhavdas. But Captain Wilkinson stated that no assistance had been given by the Kumar to Madhavdas. The same authority reported that Mayurbhanj troops had captured a place called

Tetaposa with the help of the Kols of Lalgadh and Aula *Pirs*, which placed the whole of Bamanghati entirely at his mercy. Captain Wilkinson of Hazaribagh supported the Kumar of Seraikela, while Mr. Ricketts of Orissa supported Jadunath Bhanja. The former settled the boundary between the Kumar and the Raja into two *Pirs* named Jarai and Giddarsingra.

The Kols of Bamanghati gave repeated trouble and on the 28th April plundered the Government *Dak Chaukis* in the Mayurbhanj State. Raja Jadunath Bhanja stated that this act was committed by two tribes of Kols at the instigation of the Kumar of Seraikela and Madhavdas *Mahapatra* in order to draw the displeasure of the British Government on Mayurbhanj. It was elicited during an enquiry that the offence was committed by the Kols of Lalgadh *Pir* who were adherents of Madhavdas, headed by his cousin Ratanmani, who gathered his adherents in the country of Kumar Ajambar Singh. The Kols also attacked a party of sepoys returning from an outpost on relief and wounded three of them. Raja Jadunath Bhanja agreed to pay the expenses of the Ramgarh Battalion if they were stationed at Bamanghati and he permitted the utilisation of their services for the reduction of the Lalgadh and Aula *Pirs*. Madhavdas Mahapatra had been ejected from his territory and was residing at Hazaribagh since December, utterly destitute and maintained by Captain Wilkinson. Raja Jadunath and Kumar Ajambar Singh of Seraikela were both warned that whoever broke the peace would be severely dealt with. The cost of repairing the *Dak Chaukis* was paid by Raja Jadunath Bhanja but the final decision of the Government was suspended till the receipt of the decision of the Court of Directors.*

Ganga Narain Rebellion.

Hardly had Kol rising ended in March, 1832, Ganga Narain Singh of Manbhum revolted. This Ganga Narain was a disappointed claimant to the Barabhum estate of Manbhum, and for a time the Bhumij carried all before them, sacking every place worth plundering. In November, 1832, however, a strong military force compelled them to take refuge in the hills, from which Ganga Narain fled to Singhbhum. There he endeavoured to gain over the Hos, who were just then at issue with the Thakur of Kharsawan, who claimed supremacy over a portion of them.

Owing to pre-occupation of the Government with the Bhumij rebellion, in October, 1832, the Hos of Singhbhum headed by a chief named Bindrai Mu entered Sonepore and committed depredations. In the same month a detachment of the 38th Regiment Native Infantry under the command of Subedar Mangal Singh who had proceeded to Kalkapur in Dhalbhum with a view

* Mr. R. D. Bannerji's *History of Orissa*, Vol. II, pp. 298—302.

to protecting the country during Ganga Narain Singh's disturbances was surrounded by 4,000 Chuars composed of men of Dhalbhum and Kols from Bamanghati and Singhbhum. The Mahapatra although engaged in protecting his own villages against the inroads of the Kols promptly proceeded with all his followers to the relief of the Subedar.

Whilst the troops were occupied in Barabhum in December, 1832, Thakur Chytten of Kharsawan, who was at this time at logger head with the Hos was attacked by the Hos of Kera and adjoining *parganas* at the instigation of Kera Babu if not the Porahat Raja. As mentioned before Ganga Narain Singh who fled to Singhbhum also joined the Hos in this attack against the Thakur of Kharsawan. But Chytten Singh successfully resisted the Hos and in one engagement, Ganga Narain was also killed. The Thakur had the pleasure of sending his head to T. Wilkinson. As a result of this rebellion as mentioned before, Dhalbhum was detached from Midnapore and placed with the neighbouring territory (Manbhum) under a special officer known as the Agent for the South-West Frontier.

Since 1832, the year in which the quarrel between the Mayurbhanj Raja and Bamanghati *Sarbarahkar* became of a serious nature, *dawks* on the Bombay road have frequently been carried off by the Hos. On two occasions also guards of the Ramgarh Battalion have been attacked between Bamanghati and Katkarinja. The attacks on both the *dawks* and the guards were instigated by one of the contending parties with a view to bringing the other into disgrace with the Government.

Annexation of the Kolhan.

Sir Thomas Wilkinson, the Agent, remembering the assistance rendered by the Hos in the rebellion of 1832 and their defiance of Government, now represented the necessity of thoroughly subjugating them, and the futility of forcing them to submit to the chiefs of Porahat. He therefore proposed that the Kolhan should be occupied by an adequate force, and that when the Hos were thoroughly subdued, they should be placed under the direct management of a British Officer to be stationed at Chaibasa. These views were accepted by Government, and a force composed of two regiments of native infantry, a brigade of guns, and the Ramgarh Battalion, commanded by Col. Richards, entered the Kolhan in November, 1836. Operations were immediately commenced against the refractory *Pirs*, and by the end of February following all the *mankis* and *mundas* had submitted. All the most important parts of the Kolhan were visited by the Agent and his troops; but there appears to have been very little actual fighting. The men whom it appeared desirable to make an example of, in consequence of their having been leaders in the previous

disturbances, were given up or captured, and the others readily acquiesced in the arrangements proposed. Engagements were now taken from them to bear true allegiance to the British Government; and it was stipulated that they should no longer obey the orders of the Porahat chiefs, to whom they had previously been required to submit. Altogether 620 villages with a population estimated at the time at 90,000 of whom two-thirds were Larka Kols or Hos, were thus brought under the immediate control of the British Government; and simple rules for their administration of this new acquisition were drawn up and promulgated.

In order to make the Hos submissive and docile, T. Wilkinson drew a directive to be strictly followed in the newly annexed areas of the Kolhan. He suggested that Hos should be compelled to pay *Malguzari* at the rate of eight annas per plough agreeably to the engagement they entered into with Major Roughsedge in 1821 and the collections should be made through the *mankis* and *mundas* whose appointment should chiefly depend on the popularity and influence they had in their *Pirs*. All criminal and civil justice should be administered by the officer in charge who should be required to make extensive use of *panchayats* composed of the *mankis* and *mundas* held in high estimation among the Hos. The success of this measure would depend much on the personal character of the officer first appointed to the charge. He ought to possess good sound judgment, great firmness, patience and tact in managing the natives and should be accessible at all hours. Schools should also be established and the rising generation instructed, and probably no finer field could be found in Indian Missionaries.*

He tried to ban the evil practice of witch-craft and *sokhaism* in consequence of which murders were frequent among the Hos. The murders were not confined to the person supposed to be the witch but all near relations of the supposed witch killed so that none may remain to retaliate on the parties who committed the murders .

Lt. Tickell was posted as the first British administrator at Chaibasa in 1837. He was a great naturalist and extremely sympathetic to the Kols. His compilation on birds and social customs of Singhbhum which was published in the journal of Asiatic Society of Bengal, 1840 is an authoritative document of 19th century A. D.†

Among the administrative measures taken by Lt. Tickell, special mention could be made of an attempt to open up communication, establish schools, *hats*, *melas* and jail. The rules of Wilkinson emphasised on direct contact with the Hos and to

---

* J. B. R. S., Vol. XLII (1956), p. 298.

† J. A. S. B., 1840, p. 696.

depend less on the *Dobhasis* or interpretors and the local chiefs. The integrity of the *mankis* and *mundas* was sought to be maintained and the local administration was carried on through their help. In 1854 Ricketts, who was the Member of Board of Revenue, made an extensive tour throughout the Singhbhum and reiterated in a published report the necessity of following closely the Wilkinson directives.* Dalton who was the Commissioner of Chotanagpur Division had also published authoritative records of the history and customs of the Hos which were later incorporated in his Ethnology of Bengal.

THE REVOLT OF 1857.

In the last District Gazetteer of Singhbhum O' Malley mentions that for 20 years after the 620 villages, with a population estimated at the time at 90,000 of whom two-thirds were Larka Kols or Hos, were brought under the immediate control of the British Government, the district which had been until 1837 a constant scene of bloodshed and rapine had peace. O' Malley observes that this peace was broken by the "Mutiny of 1857".

O' Malley describes "When the Mutiny broke out, Chaibasa, like other stations in Chotanagpur, was held by a detachment of the Ramgarh Battalion, which, though a local corps, was composed, to a great extent, of Hindustanis of the same material as the regiments of the line. On the 30th July the troops at Hazaribagh mutinied. A detachment of the Ramgarh Battalion was sent to attack them, but also broke into open revolt and marched back to Ranchi, where the mutinous sepoys were joined by the other troops. As soon as this news reached Chaibasa, the Principal Assistant Commissioner in charge there abandoned his station, placed himself under the protection of Chakradhari Singh, the Raja of Seraikela, and then marched off to Raniganj with an escort provided by the Raja. Before leaving, he committed the care of the district to the latter, who took prompt measures for the protection of Chaibasa, and called on the various petty chiefs to send in their contingents. There was no backwardness except on the part of the Porahat Raja, who, from jealousy of the Seraikela chief, refused to send in his quota or even to acknowledge the genuineness of the summons. Had there been any European officer present, there can be little doubt that the irregular force thus collected would have been sufficient to prevent any attempt at mutiny; but, with no one to control them, petty jealousies broke out among the retainers of the various chiefs; and thus disunited they did not venture to act against the disciplined sepoys.

* *Reports of Ricketts*, published by the Government, 1854.

It was, however, not till upwards of a month after the mutiny at Ranchi, and when emissaries from that place had been sent, returned, and again been sent to Chaibasa, that the sepoys mutinied. At last, in the beginning of September, persuaded that the British rule was at an end, they plundered the treasury, broke open the jail, and set off for Ranchi to join their fellow mutineers with the contents of the treasury. They failed to cross the Sanjai, then in flood, and the Hos, denying the sepoys' right to remove the revenue collected from them, gathered in thousands, cut off all stragglers and harassed them continually. The baffled mutineers were at length only too glad to accept the invitation of Arjun Singh, Raja of Porahat, that they should join him and make over to him the greater part of the money taken from the treasury.

On the 16th September, Lieutenant Birch, who had been appointed in place of the Principal Assistant Commissioner, reached Chaibasa with the Raja of Seraikela, the Raja of Kharsawan, and a body of 3,000 Kols. Having reoccupied the station, he peremptorily called on the Raja of Porahat to deliver himself up, restore the Government treasure, and make over the rebellious sepoys. After numerous professions of his intention to do as he was ordered, the Raja at length marched off to Ranchi, and there made over to the Commissioner, Colonel Dalton, the whole of the plundered treasure, with one hundred sepoys as prisoner. He was reproved for his disobedience of orders, and directed to return at once to Chaibasa and give himself up to Lieutenant Birch for trial. The Raja, however, appears to have been completely in the hands of his Diwan, a man named Jagu, for whose apprehension on account of previous delinquencies, a reward had already been offered by the Government. This man was reported to be doing his best to excite the Kols to rise and using all his influence with the Raja to prevent his submitting to Lieutenant Birch. Whatever may have been the cause, the Raja did not give himself up, but continued to make professions of loyalty and to promise that he would keep his pledges.

Lieutenant Birch had now been reinforced by 100 Sikhs, and all seemed quiet in the district, the principal landholders having renewed their submission, while the raiyats were engaged in gathering in their harvest and to all appearances peaceably inclined. Towards the end of November, perceiving that there was little chance of the Raja voluntarily surrendering himself, and being apprehensive of the machinations of Jagu Diwan, Lieutenant Birch determined on an expedition against the rebel force which had by this time collected round the Raja. On his way to the position they had taken up, he surprised and captured Jagu Diwan (who was summarily tried, sentenced and hanged), and was completely successful in an attack on the Raja's stronghold. The Raja himself had just time to effect his escape into the

neighbouring jungle. Here again the chief of Seraikela afforded great assistance to Lieutenant Birch, as did the zamindars and petty chiefs, such as Kumar Jagannath Singh, Babu Balu Bhadder Singh, the Babu of Kera, Babu Ujainath Singh, Dahru Manki, Sibu Manki and Karkand Dafadar."

This account regarding Arjun Singh does not appear to be warranted. O' Malley describes Arjun Singh, Raja of Porahat, as rebel.

Raja Arjun Singh and his brother, according to the last Gazetteer fomented the trouble and wanted to raise the whole of Kolhan or the area where the Kols lived, in rebellion. There were two reverses so far as the British were concerned. Lushinton who had been temporarily appointed the Special Commissioner for the District of Manbhum and Singhbhum managed to save his life and to go back to Chaibasa with a much smaller section on the 14th January, 1858 when he took an offensive to punish some Sardars at Bar *Pir*. The residence of the Porahat Raja at Chakradharpur then in occupation by the Raja of Seraikela was attacked and the force there fled away. There were successive attacks and counter attacks and the Kols as a body rallied round the Raja of Porahat. The Kols showed a high technique of guerilla warfare and with bows and arrows they were not afraid to face the Enfield guns of the British troops under the protection of the jungles. Ultimately the Raja surrendered on the 15th February, 1859. The surrender of the Raja at once put an end to the disturbances.

This story brings out the picture as if Raja Arjun Singh was a rebel of his choice and his state was rightly confiscated. A study of the old correspondence, however, gives an impression that the Raja of Porahat was actually driven to open rebellion and that Lt. Birch by his cussedness and short-sighted policy of patronising the Raja of Seraikela and other petty chiefs at the cost of the Raja of Porahat, whose status was claimed higher than that of any other chiefs of Singhbhum district was at the bottom of all the trouble. Had there been a more humane administrator in Singhbhum like Wilkinson who in 1834 had done a good deal of improvement in Singhbhum by sympathetic administration there would not have been "a rebellion" by the Raja of Porahat.

For an appraisal of the background we have to go into the story how the British came to Singhbhum. Singhbhum had never fallen in the hands of the Marhattas. The Hos, the Adibasis of the district, had maintained their independence in their mountain and fastnesses their military prowess had earned for them the designation of Larka Kols, i. e., the fighting Kols. The north of the district was under the rule of Singh family of Porahat who claimed to be Rathore Rajputs and whose head was known as the Raja

of Singhbhum. It is claimed that at one time the Singh Raja also ruled over the territory later included in the States of Seraikela and Kharsawan now merged in the district of Singhbhum.

The British penetrated into Singhbhum through Dhalbhum. In 1767 a small British force marched against the Raja of Dhalbhum who had held out even after the resident at Midnapore had succeeded in obtaining the submission of the neighbouring zamindars of Barabhum in Manbhum, and the Ensign John Ferguson was sent with force to bring round Dhalbhum. The Raja of Dhalbhum was removed and his nephew Jagannath Dhal installed. The latter again after sometime had to be removed and substituted. This expedition against Dhalbhum brought the British into contact with the Raja of Porahat or as he was called, Raja of Singhbhum.

Raja Jagannath Singh of Porahat in 1767 contacted George Vansitart, Resident of Midnapore and this proposal of overture of Raja of the Porahat was encouraged. Subsequently in 1793, the two neighbouring chiefs, the Thakur of Kharsawan and Kunwar of Seraikela entered into an engagement with the British. In 1820, the Political Agent Major Roughsedge contacted the Raja of Porahat who acknowledged himself as a feudatory chief of the British. The aim of the Raja of Porahat was to be recognised as the Lord Paramount over the chiefs of Kharsawan and Seraikela. The claim was apparently disallowed on paper. But the Raja of Porahat was somehow treated as if of superior status to the chiefs of Kharsawan and Seraikela. Another object of the Raja of Porahat to become a feudatory chief under the British was to subjugate the Kol or the Ho chiefs who had always treated the Raja of Porahat with great veneration, but not as the overlord. As mentioned before Major Roughsedge entered into Kolhan at the instance of the Raja of Porahat. There were several encounters and a large number of Hos were massacred. The Hos of the northern *Pirs* (string of villages) submitted first and entered into engagements acknowledging the Raja of Porahat as the overlord. But Roughsedge could not subjugate the Hos of the southern *Pirs* and he had to fight his way out of Singhbhum. The Hos that had not yielded started a regular warfare with the Hos that had submitted and were with the Raja of Porahat. Again the chiefs of Porahat and Seraikela wanted the British to reduce the Hos. The Hos were overrun by a large force and they were forced to enter into the agreements to pay tributes to the chiefs. But this was soon followed by a rebellion known as the Kol rebellion in which the Hos of Singhbhum and the *mundas* of Chotanagpur joined. The immediate cause was the short-sighted policy of settling some farms of some of the villages in the Estates of the Maharaja of Chotanagpur with some Mohammadans, Sikhs and others. The aboriginals had always looked with suspicion

the slow inroads of the "*Dikkus*" or the foreigners. Their cup of misery was full when the *manki* (the headman of a number of villages) called Singrai, was dispossessed of 12 villages bordering on Singhbhum and they were given to the Sikhs and two of the *manki's* sisters were molested by the "*Dikkus*" Another Munda of Bandgaon whose name was Surga complained that his wife had been dishonoured. The message went round through the suggestive arrow passed on from hand to hand that a common cause must be made and a few weeks later the whole *munda* population on the border of Ranchi and Singhbhum districts rose to a man. The villages taken out from Singrai were burnt and the "*Dikkus*" ejected. Similarly Jafar Ali, the seducer of Surga's wife, was murdered along with 10 of his people and some children. It was with great difficulty that this insurrection could be put down. Troops from Barrackpore, Dinapore and Hazaribagh had to be rushed in.

After the suppressions of this rise in 1834 Sir Thomas Wilkinson, the Agent, brought in a better administration at Chaibasa and issued strict directives for a sympathetic but firm rule. Some of Wilkinson's directives still hold good.*

It is with this background that the so-called rebellion of Raja Arjun Singh and his brother of Porahat had to be appreciated. The old correspondence does not justify a summary disposal of the Raja of Porahat as an out and out rebel as has been done in the last Gazetteer. Firstly, it has to be remembered that immediately on the breaking out of the rebellion, the Administrator at Chaibasa left the station under the protection of the Raja of Seraikela and had practically handed over the administration to the Raja of Seraikela, and the Thakur of Kharsawan. The Raja of Porahat had always treated himself to be superior to the Raja of Seraikela or the Thakur of Kharsawan. Seraikela being closer to Chaibasa, the Raja of Seraikela had a bigger hand in the affairs of Chaibasa after the administrator left. Porahat Raja was sore about it. Prestige was a great personal equation with the aristocracy.

In letter no. 16 of Dalton, the Commissioner of Chotanagpur, to A. R. Young, the Secretary to the Government of Bengal, Fort William printed at page 11 of Dalton's report on the Mutiny at Chotanagpur, one reads "I have received a communication from the Raja of Seraikela dated 26th ultimo. He had up to that date been successful in preserving the order and had kept the detachment of the Ramgarh Battalion and their position; as they were in want of money he has made them advance from his own funds. The Government Treasury Records, building, etc., are preserved and the Raja hopes to be able to make all over in good order to the Senior Assistant Commissioner when he arrives. The

* For further investigation please *see* " Singhbhum Old Records " published separately (P. C. R. C.)

Porahat Raja, it is reported, gave no assistance. I have addressed both the Rajas on the subject, commended the one and stimulating the other".

It will be seen that Dalton's source of information was the Raja of Seraikela and it was obvious that the Raja of Seraikela who had been put in a superior manner in charge of the affairs of Chaibasa by the fleeing administrator could not but have informed that it was he who was holding the ground and that the Raja of Porahat was *doing nothing*. Ultimately, however, the treasure was plundered at the beginning of September and the looters went towards Ranchi, but were intercepted by Arjun Singh, the Raja of Porahat. O' Malley has done a great injustice by holding that Raja Arjun Singh induced the looters to make over to him the greater part of the money. The fact is that as soon as Lt. Birch came to Chaibasa on the 16th September he fell into the arms of the Raja of Seraikela and gave a hasty order to the Raja of Porahat "to deliver himself up" and to restore the Government treasure and make over the rebellious sepoys. The human touch of treating the Raja of Porahat in a proper manner particularly because of the excellent services he had rendered in capturing the rebellious troops and kept the looted treasury with him was missing. It was forgotten that Raja Arjun Singh had successfully stopped the mutineers from joining the mutineers of Ranchi. Ranchi had already been deserted by the British who had gone to Hazaribagh. The Raja's services were absolutely forgotten and he naturally resented the insulting order of Lt. Birch "to deliver himself up".

The justification of this interpretation is shown in Dalton's letter no. 41, dated 30th September 1857, to the Secretary, Government of Bengal, Fort William. Dalton Writes:—

"I have this day received a letter from the Senior Assistant Commissioner at Chaibasa on the state of affairs of his district of 22nd instant.

"The Porahat Raja had not up to that date fulfilled his promise of sending any mutinous sepoys and treasury detained by him and as Lt. Birch had to prove that the Raja had attempted to raise the Kols he has taken the other strong measures of proclaiming him the Raja as rebel and offering a reward of Rs. 1,000 for his apprehension.

"Lt. Birch deserves great credit for boldly assuming the charge of the division without any assistance except what he could have obtained from the Seraikela Raja. But under the circumstances his policy should have been to the latest possible moment conciliatory and from the information before me I am inclined to regret his having offered a reward for the Raja's apprehension as this is calculated to drive that chief at once into violent measure when in all probability he was only waiting the turn of events and

might have done all that was required, the moment he heard that Ranchi had been re-occupied."

Dalton could see clearly through the events that led the Raja of Porahat resent Birch. In his letter no. 42, dated 1st October, 1857 Dalton reported to the Secretary to the Government of Bengal, Fort William as follows:—

"After writing my letter yesterday no. 41, I received from Chaibasa a copy of Lt. Birch's communication to your address no. 43, dated 23rd instant submitting his reasons for declaring the Porahat Raja as rebel and his estate confiscated. It appears to me highly probable that in the negligence of the Porahat Raja to promptly attend on Lt. Birch he has been actuated by his dread and jealousy of the Seraikela Raja. Lt. Birch believes that his intention towards the Raja had been misrepresented and considers that the Raja has been influenced by ill advices ....To declare him to be a rebel, confiscate his estate and offer a reward for his apprehension are measures that should not, I think, have been so hastily resorted to. Lt. Birch should at all events have taken care that the Raja had understood his orders and intentions before he adopted such severe measures against him not acting up to them".

In the same letter Dalton mentions that "I have this morning received an *urzi* from the Porahat Raja, dated 26th instant. He states that the Chaibasa sepoys after plundering the treasury attempted to get away first by Seraikela-Kharsawan, but being opposed at the ghats they tried the Porahat route. At this the Raja met them, took from them their arms and ammunitions and Rs. 1,850-4-8 in cash intending that when they returned to their posts to give them up. He was, however, alarmed by the Seraikela forces defending against him and feared to go to Chaibasa and now he learns that an order to seize him has been issued which makes him more fearful; notwithstanding that he has allowed to deliver up the treasury, arms and the sepoys".

Dalton had no misgivings in his mind that Lt. Birch did a wrong by declaring the Raja of Porahat as rebel and confiscating his estate. He mentions in the same letter that "in declaring the Porahat State confiscated and issuing orders accordingly to the subordinate landlords, Lt. Birch had, I think, exceeded authority and it was not necessary for him to have proceeded to such extremities without previously submitting his proceedings for the consideration of his immediate superiors or to Government".

Ultimately Raja Arjun Singh saw Dalton and produced before him the prisoners and the looted treasury. The Raja made it clear that as he had been declared a rebel he feared he would not be treated with consideration by Lt. Birch and so he did not go there.

Dalton although in a superior official position had ultimately to yield to Lt. Birch, the man on the spot who was calling for

the blood of Arjun Singh all the time and corresponding with the Secretary to the Government of Bengal at Fort William over the head of Dalton, the Officiating Commissioner. In another letter no. 224, dated 30th September, 1859, to the Secretary to the Government of Bengal, Dalton gave very emphatically his opinion on the so-called rebellion of Raja Arjun Singh. He writes that "I have already given it as my opinion that up to the period of the Ex-Raja's visit to Ranchi when he delivered up the mutineers, their arms, treasuries, etc., to the authorities there, he had not been guilty of any act of rebellion or treasonable design against the Government and I consider, therefore, he is entitled to full credit for the services rendered on that occasion.

"This being admitted, he might plead he had committed no act of rebellion till driven to it by the attack on his residence at Porahat, its destruction and the plundering of its property, but I have no hesitation in stating that the wavering, vaccillating conduct of the Ex-Raja after his return from Ranchi, coupled with the war-like preparation that it was proved were pushed on at its residence, fully justified the attack and the other consequences were the natural result of the resistance offered."

It will be remembered that at this time the Raja was still at large. Dalton wanted him to surrender and mentioned in the same letter: "I have already stated that the surrender must be regarded as unconditional. But I take it for granted that the Government will be willing to extend to them the full benefit of Her Majesty's amnesty.

"The circumstances appear to be the unreasonable state of alarm and suspicion that led Arjun Singh to conceive that he would forfeit his freedom and perhaps his life, if he presented himself to Lt. Birch, and the rubicon of rebellion once passed he was no doubt encouraged to remain in revolt by too credulous acceptance of the false report of the designing men.

"If the Government is disposed to take this view of the case, it does not appear to me necessary that any further trial should take place".

But while Dalton was opposed to the trial of the Raja on grounds of treason he fully supported the confiscation of the Porahat Estate. He writes in the same letter that "the Porahat Estate has been long ago judicially confiscated and nothing would induce me now to recommend the smallest deviation from that sentence. The indifference of the Ex-Raja to the sufferings of the non-combatant cultivators of Porahat whom he caused to be plundered and burnt out of their villages, the immense influence he and his brother are shown to have possessed and to have so banefully used in Singhbhum render it in my opinion imperatively necessary that not one acre of the confiscated estate should ever be restored

to them and they should both be for ever debarred from setting foot in the Singhbhum district."

In this letter no. 224 to Government, dated 30th September, 1859, Commissioner Dalton recommended to the Government that he thought it would be sufficient if the two prisoners (Arjun Singh and his brother) with their families were permitted to reside under some surveillance at a station considered suitable by the Government and adequate allowance given to them. But obviously Dalton's recommendation was not accepted and the recommendation of Lt. Birch had the approval of the Government. It is curious that this important letter no. 224, dated 30th September, 1859 does not find a mention in the Blue Print of Colonel E. T. Dalton's Report on the Mutiny of Chotanagpur printed in 1918.

Arjun Singh subsequently died in Banaras while the trial was pending. The whole of the Porahat State was confiscated and now forms the bulk of Kolhan Government Estate.

The study of the old correspondence gives the firm impression that Raja Arjun Singh was really forced to revolt because of the questionable policy of Lt. Birch and it is a tragedy that the more humane suggestions of Commissioner Dalton did not prevail upon the Government.

This case has its parallel in the case of Kuar Singh of Jagdishpur in Shahabad District who had raised the standard of revolt in 1857 in Shahabad. Kuar Singh was also forced to resort to revolt as Commissioner William Taylor of Patna Division mentions in his autobiography. As a matter of fact if Raja Arjun Singh had joined Kuar Singh after traversing through Ranchi, it is doubtful if the British could have suppressed the revolt in Chotanagpur so quickly.

While the Raja died as a State prisoner in Banaras the Porahat State was split up and some of the chiefs and zamindars were rewarded for the loyal services by the carving out of Porahat State. Seraikela Pargana without its coal-pits and the villages of Bhalupani, Rangrin, etc., was granted to the Raja of Seraikela rent-free in perpetuity. Some villages went to the brother of Raja of Seraikela, some to Thakur of Kharsawan and so on. The Estate remained under the direct management of the Government till 1895. The Ex-Raja Arjun Singh died in 1890 at Banaras leaving behind Kumar Narpat Singh, his only son. By a deed of release dated 4th October, 1895 Kumar Narpat Singh was granted by Government "as an Act of Grace" the unalienated portion of the original Porahat Raj. After the death of Raja Narpat Singh in 1934 the Estate escheated to Government. Three abortive suits instituted by the alleged agnates

were eventually withdrawn and the two other suits were dismissed for default, which orders were confirmed by the High Court. The Government are now administering the Estate as the Government Khas Mahal Estate.*

BIRSAIT RISING.

The district of Singhbhum had peace since 1858 except for the disturbances caused by the Birsait rising, so called after a young Munda named, Birsa, of Chalkad, a small village in the hills in the south of Tamar thana in the district of Ranchi. He appears first to have been a Lutheran Christian, having been partially educated in the German Mission School at Chaibasa, and then to have apostacized declaring himself to have become a Munda again. In 1895 he suddenly proclaimed himself to be an incarnation of the deity, destined to save the Mundas in this world and the next. He gave out that all who did not join him were doomed to destruction, claimed miraculous powers of healing, and made a number of extraordinary predictions which were fully believed in. At one time, he announced that a rain of fire would destroy all except those who were living close round him. This prophecy transformed Chalkad and the neighbouring hills into a large camp. At another time, he told the people that a deluge was coming, and the only dry spot would be where he was; that in view of the deluge, it was useless for them to continue to weed their crops, and that having no further need of cattle for ploughing, etc., they should turn them all loose; that all Government rupees and pice would be turned to water, and it was, therefore, useless to keep them, and they should, therefore, at once spend all they had in purchasing clothes. In consequence of these instructions, cultivation among the Mundas was stopped, thousands of cattle were turned loose into the jungle and all the clothes available at the local markets were rapidly bought up.

Birsa's preaching was a strange medley of admonitions in favour of purity and asceticism, and of injunctions to his followers to defy the Government and its officers. The refrain was to the effect that the British Raj was over and his (Birsa's) Raj had now commenced; that if the Sarkar tried to oppose him, its guns would be turned into wood, and its bullets into water; no one was in future to obey the Government, but only Birsa; no one was to pay rent any more, as all lands were to be held rent-free. He daily became more imperious, summoning to his presence persons who had not hitherto come to him, whether Mundas or Hindus. At length, he sent for some Rajputs of Kuchang, who had declined to have anything to do with him. On their refusing to obey his

---

* "*Revolt of Raja of Porahat in Singhbhum in* 1857" by P. C. Roy Choudhury in *Journal of Bihar University*, 1956 (Patna).

summons, he deputed men to seize and bring them in. The Rajputs heard of their purpose, and, quietly slipping away, went to Ranchi and complained to the Deputy Commissioner. Their complaint led to the issue of orders for Birsa's arrest. This was quickly effected, and Birsa was sentenced to two years' imprisonment with fifteen of his followers.

While Birsa was in jail there were no signs of activity amongst his former followers, and it was hoped that trouble from the Mundas was over. But this was not to be, for Birsa, though in jail, was still regarded as their "Bhagwan" by the Mundas, who, were ready, on his reappearance, to place themselves again under his orders. Indeed, no Munda believed he was really confined. They declared that he had gone up to heaven, and that authorities had only a clay figure in jail, which they pretended was Birsa. When he was released in November, 1897, he began moving about the country holding moonlight meetings and dances on the hill tops. In January, 1898, the Hindu temple at Chutia, in the outskirts of Ranchi, was desecrated by a band of Mundas, who after holding a nautch within its precincts, cast down and broke the idols inside the temple. The Hindu inhabitants were aroused and managed to arrest several of the offenders, who pleaded that they were not free agents, but were acting under Birsa's arrest and a reward offered for his capture. Every possible effort was made by the Deputy Commissioners of Ranchi and Singhbhum and the police of either district to discover his hiding place during the succeeding months, but without avail. It was finally decided that nothing further could be done but to await the first signs of his reappearance. Nearly two years elapsed before Birsa made a move, and for the whole of this time he was carefully hidden away in the hilly jungles in the north of Singhbhum. It was again given out that he was in heaven; in fact, before he disappeared, he was reported to have given out that he was leaving the earth for a time , but would return again.

On the 24th December, 1899, the followers of Birsa attacked and burnt a number of villages in the southern parts of the Ranchi district and in the north of Singhbhum. The Deputy Commissioners of these two districts immediately went out supported by the armed police reserves of both districts and by a company of the 6th Jats from Doranda. The accounts received during the next few days, followed by a report on the night of the 7th January of a raid on the Khunti thana by a large armed mob, showed that the outbreak was of a more determined and widespread character than was at first supposed, being no less than an organised revolt of the bulk of the discontented Munda population under the leadership of Birsa. The rest of the available troops at Doranda were at once called out, and two companies of military police were sent by Government.

Swift retribution overtook the armed assembly that had raided the Khunti thana. The insurgents were overtaken two days afterwards by the troops in a strong position on the Sailrakub hill, and, as they refused to surrender, the troops were ordered to use their fire-arms and then storm the position, with the result that four of the insurgents were killed and nine wounded. This had an excellent effect, especially by dispelling the belief, which until then had undoubtedly been firmly held, that Birsa had rendered the arms of the Government troops innocuous; and after this no more armed assemblies were heard of. Three flying columns were also marched through the disaffected tracts, two in the Rnachi district, and the third in Singhbhum, under the command of the Deputy Commissioner, Mr. Thomson. By the 25th January active operations were practically over, and the assistance of the troops was dispensed with, with the exception of the guards at some of the out-stations, who, however, were shortly afterwards relieved by the military police. Up till then, every attempt to discover Birsa's hiding place had been fruitless, but at last on the night of the 3rd February, he was cleverly tracked by some spies and arrested, with his two wives, in one of the deep jungle recesses amongst the northern hills of Singhbhum. While under trial, he was seized with cholera and died in jail in June, 1900.

The outbreak was a brief one, all the outrages being committed in Christmas Eve, Christmas Day, and during the next few days. The area over which the rising spread was, however, of wide extent, including the Khunti, Tamar and Basia thanas in the Ranchi district, and about 400 square miles of hilly country in the north of Singhbhum. The rising, though sudden, was due to long smouldering discontent. For some 15 years past an agitation had been carried on through the instrumentality of Munda sardars, nearly all perverts from Christianity. Their movement was known as the *Sardari Larai*, and its object was to supplant zamindari interests and to assert the right of the Mundas to hold directly under Government. At their instigation the Mundas put forward claims extending to the absolute proprietorship of the soil, subject only to the payment of Government revenue. From Ranchi the movement spread to Singhbhum where the Mundas readily embraced it, the immediate reason of their agitation being the formation of reserved forests. When Birsa came to the front, the sardars, finding that their own agitation was likely to be fruitless, consented, as a last resort, to join forces, and fell in with his plans. These plans went much further than those of the sardars, for there can be no doubt that Birsa's aim was to place himself at the head of a Munda Raj and throw off allegiance to the then Government.

The movement under his control had a two-fold significance, a political and a religious. The political object was to obtain

the country of the Mundas for the Munda. The religious or social represented a revolt against Christianity—it is noticeable that the rising began on Christmas Eve and that a number of outrages were committed on Christmas Day. It was an attempt to form a new religious sect or caste to include, among others, discontented converts to Christianity, who had lost their own caste and were dissatisfied with their existing condition. There can be no doubt, however, that, though there was this religious aspect, the main object of the movement was the assertion of the supposed ancient rights of the aborigines in the soil and over the jungles. The leaders among them had also their own personal aggrandisement in view, but the idea amongst their ignorant followers was that by an organised revolt they would be able to upset the authority of Government, and by the institution of a reign of terror compel submission to their demands. There can also be little doubt that both the *Sardari Larai* and the Birsait rising had their origin in the same cause, viz., long years of brooding and discontent amongst the Mundas, and that in the end both movements became merged in one.

ADMINISTRATIVE CHANGES.

Dhalbhum was the first part of the district to be brought under British rule, and was administered from Midnapore till 1833 when it was transferred to Manbhum. With other parts of Chotanagpur it was exempted by Regulation XIII of that year from the operation of the general laws and regulations, and every branch of the administration was vested in an officer appointed by the Supreme Government and styled the Agent to the Governor-General, South-West Frontier. After the conquest of the Kolhan, it was determined to bring all the Ho *Pirs* or cantons under the direct management of the British Government, and for that purpose a Principal Assistant was established at Chaibasa; and four *Pirs* of Mayurbhanj, sixteen of Singhbhum, four of Seraikela and one of the Thakur of Kharsawan, in all 25 divisions known by different names, were assigned to the Assistant to the Governor-General's Agent placed over the new district. In 1848 his charge was extended by the transfer of Dhalbhum from Manbhum.

In 1854 by Act XX of that year Chotanagpur was transferred to the control of the Lieutenant-Governor of Bengal under a Commissioner, and the officers in charge of Singhbhum and the other districts were styled Deputy Commissioners.

As already mentioned Porahat was confiscated in 1858 on account of the move of Raja Arjun Singh against the British and its revenue administration was made over to the Board of Revenue in 1859, but it continued in other respects to be managed as a Tributary State.

The history of the district from 1858 up to 1947 was the history of the other districts of Bihar—the consolidation of the British administration, the administrative changes and the emergence of a powerful agitation against the British which ultimately was made more acute by the Indian National Congress. The history of this period is practically the history of the other States as well along with Bihar. In 1947 India received her independence and was declared a Republic.

As mentioned above there were significant administrative changes in the matter of jurisdiction which was vital for the district. Seraikela and Kharsawan were States before and the way they were merged to the State of Bihar and amalgamated with Singhbhum district has been mentioned elsewhere.

Regarding Seraikela the last District Gazetteer of Singhbhum, Seraikela and Kharsawan published in 1910 mentions:—"The nucleus of the present State was formed some generations before the establishment of British rule by Bikram Singh, a younger son of the Raja of Porahat (formerly called the Raja of Singhbhum), who was given a fief known as the Singhbhum *Pir*, a tract of 50 square miles with 12 villages, bounded north and south by the Sanjai and Kharkai rivers. Bikram Singh made his headquarters at Seraikela and quickly extended the limits of his domain. To the north he wrested from the ruler of Patkum the Kandra Dugni, and Banksai *Pirs*, and also Kharsawan, which then comprised the Kharsawan and Asantalia *Pirs*, and to the north-east he seized on the Gamharia *Pir*, which was then a tract of uncleared jungle. His descendants similarly enlarged their dominions, and not only became independent, but eclipsed the parent family of Porahat in power and importance.

The British appear first to have come into contact with Seraikela in 1770. The year before this the Chuars or Bhumij tribe had made one of their predatory raids into Dhalbhum, where the British were trying to establish their rule. Two detachments were sent from Midnapore to clear them out of the country, but no sooner had the troops done their work than a party of sepoys left at Kuchang in the south of Seraikela was cut off. A punitive expedition was then sent up with orders to bring the Kuchang zamindar to account, take possession of his territory, and send him a prisoner to Midnapore. These orders were subsequently cancelled as encroaching on the rights of the independent Raja of Mayurbhanj, who appointed the zamindar of Kuchang. The Raja was induced to dismiss him and appoint the zamindar of Bamanghati in his stead, but the latter was to obey the orders of the Resident of Midnapore and be responsible for the peace of the border: otherwise, he was to be dispossessed of both Bamanghati and Kuchang. The British troops then withdrew.

After this the British appear to have had no further relations with Seraikela till 1793, when its chief was induced to give an undertaking not to give shelter to fugitive rebels from British territory. Ten years later the Governor-General caused friendly communications to be addressed to the then Chief, Kunwar Abhiram Singh, inviting his assistance in the war against the Marathas and assuring him that the British Government would always respect his rights to hold Seraikela revenue-free. Lord Minto, the next Governor-General, similarly addressed the Chief as an equal rather than a dependent Chief and recognised him as one of the staunchest friends of the British.

The relations of Government to the Chief were put on a different footing after the Raja of Porahat became tributary and concluded (in 1820) an engagement by which he was to pay a tribute of Rs. 101 per annum, while the British undertook not to interfere in any way with the internal administration of his State. It was intended that similar agreements should be entered into by the Chiefs of Seraikela and Kharsawan, but no such agreements can be traced. The suzerainty of the British Government appears to have been recognised by the Chief, who, at its bidding, in 1823 restored to the Raja of Porahat a tutelary idol claimed by him. The British Government also apparently reserved to itself the right to recognise succession to the chiefship, for we are told that when Bikram Singh died in 1823, his son Ajambar Singh was formally installed under the title of Kunwar and a *khilat* or dress of honour was presented to him by the British Government. On the other hand, it did not demand tribute or revenue, and it did not interfere in any way with the internal administration of the State.

In 1837, when the Kolhan was brought under the direct management of a British officer stationed at Chaibasa, the Kunwar was treated as subordinate to him. Though the Kunwar heard and decided all civil cases arising in his territory, an appeal lay to the Principal Assistant as that officer was called, while his authority in criminal cases was strictly limited. In 1838 it was laid down that all cases of murder were to be sent for trial to the Principal Assistant; and an order of 1842 directed that all serious cases should be referred to the Assistant, and trifling cases dealt with by the Chief. In practice, murder, dacoity, burglary, cattle-stealing, and procuring abortion were regarded as serious cases, but there was no systematic classification of crime. At this time the Chief was allowed to confine prisoners for short periods in jails of his own; but in 1848 the Commissioner directed that all persons confined by the Chief's orders should be sent for imprisonment to Chaibasa. The Chief gradually gave up exercising his judicial powers, and sent even the most trifling cases to the Assistant at Chaibasa, so that in 1853 there was not a single person in confinement under his orders.

The Chief of Seraikela at that time was Chakradhar Singh Deo, who bore the title of Kunwar, but in 1856 was granted the title of Raja Bahadur as a personal distinction. During the Mutiny he rendered valuable service and was rewarded by the bestowal of a *khilat* and the grant, rent-free in perpetuity, of the sub-estate of Karaikela, a portion of the sequestrated territory of the Raja of Porahat. He subsequently gave assistance to Government during the Keonjhar disturbances of 1868 and was succeeded in 1883 by his son Udit Narayan Singh Deo, the present Chief who was given the personal title of Raja Bahadur next year, and rendered assistance during the Bonai and Keonjhar risings in 1888 and 1891".

KHARSAWAN.

Regarding Kharsawan the old District Gazetteer mentions as follows:—"The Raja of Kharsawan traces back his descent to Bikram Singh, a younger son of the Raja of Porahat, who was given a fief in the Seraikela State and rapidly extended the limits of his domains by conquests from his neighbours. Among the tracts conquered by him was Kharsawan, which then comprised the two *Pirs* of Kharsawan and Asantalia. The former he settled on his second son, from whom the present Chief is directly descended. The latter he settled on his third son, but, on the failure of male heirs, it passed into the possession of the Chief of Kharsawan. Relations with the British are traced back to 1793, when, in consequences of the disturbed state of the frontier tracts called the jungle mahals, its Chief, who bore the title of Thakur, was compelled to enter into an agreement promising not to give shelter to fugitives from British territory. In 1820 the Raja of Porahat concluded an agreement with the British by which he became a tributary Chief, and apparently it was intended that a similar agreement should be entered into with the Thakur of Kharsawan, but no such agreement can be traced. No tribute or revenue was paid, but the overlordship of the British and the liability of the Chief to furnish troops, when called upon, were recognised.

In 1832 the State was invaded by the rebel, Ganga Narayan, who had headed a rising of the Bhumij tribe in Manbhum against the British. Having been driven out of Manbhum, Ganga Narayan endeavoured to rally round him the Hos of Singhbhum, who were then resisting the claims of the Thakur of Kharsawan to part of their territory. They, accordingly, demanded that he should in the first instance make an attack on the Thakur's fort. He was killed in the assault and his head sent to Captain Wilkinson, the British Agent, by the Kharsawan Chief. As in the case of Seraikela, the British assumed a closer control of the State after the annexation of the Kolhan, and the Chief was treated as a subordinate of the Principal Assistant at Chaibasa. Though

he had full power to decide civil cases, an appeal lay to the latter while his authority in criminal cases was limited. Eventually he gave up trying any criminal cases and referred even those of the pettiest character to the British courts.

During the Mutiny of 1857 the Chief Ganga Ram Singh Deo rendered good service to the British and was rewarded by a grant of four villages, Setahaka, Simudiri, Samraidi and Dalki in the Sadant *Pir* of Chakradharpur, out of the confiscated estate of the Porahat Raja. The present Chief is Sriram Chandra Singh Deo, who succeeded in 1902 on the death of his father, Mahendra Narayan Singh Deo. As he is a minor the State is under Government management for the time being."

Just as the district was a scene of constant fights and political changes the last fifty years have seen a very great industrial revolution within the district which was brought about by a scientific exploitation of the great mineral resources of the district. The economic revolution and the rapid industrialisation of the district was the beginning of the emergence of a great tract which traces from within West Bengal to Madhya Pradesh and beyond that will ultimately one day become Ruhr of India.

Regarding the other changes in the jurisdiction of the district details have been given in the chapter on General Administration.

BIBLIOGRAPHY.

R. D. Banerji .. *History of Bengal*, Vols. I & II.

Ditto .. *History of Orissa*, Vols. I & II.

Dalton .. *Ethnology of Bengal.*

Patil, D. R. .. *Cultural History from the Vayu Purana.*

Chaudhury, S. B. *Ethnic Settlements in Bengal.*

Mazumdar, R. C. .. *History of Bengal*, Vol. I.

Sinha, B. P. N. .. *Decline and Fall of the Gupta Empire.*

Anderson, C. W. .. Notes on Prehistoric Stone Implements found in Singhbhum district, *J. B. O. R.S.* III, pp. 349-362.

Ball, Valentine .. Remarks on a communication of Capt. Beaching. *P. A. S. B.* , 1868, p. 177.

Ditto .. On ancient C. M. in Singhbhum *P. A. S. B.*, 1869, pp. 170-175.

Ditto .. Stone implements discovered in Singhbhum. *P. A. S. B.*, 1870. P. 268.

Ditto .. Stone Monuments in the district of Singhbhum and Chotanagpur IA., Vol. I, pp. 291-92.

Roy, S. C. .. The Mundas and their Country, 1912.

O' Malley. L. S. S. District Gazetteer of Singhbhum, Seraikela and Kharsawan (1910).

[Reid's annotated edition of Chotanagpur Tenancy Act, Settlement Reports, unpublished papers in the archives of West Bengal Secretariat—Historical Division, Tickell's Report, unpublished papers in the District Record Room at Chaibasa, Record Room in the Office of the Commissioner. Chotanagpur Division, etc., have been consulted and drawn upon.

"Singhbhum Old Records" containing extracts or digests of the important old correspondence (1833-1875) in the District Record Room at Chaibasa, an excellent source material is published separately.]

CHAPTER IV.

FORESTS.

Area of the Forests.

The forests of Singhbhum extend over an area of 1,732.44 square miles in 1957 as against 1,603 square miles in 1950, or more than one-third of the total area of the district. The forest area of the district has been put under six divisions for administrative purposes. The area under each Forest Division as it stood in 1957 is as follows :—

Forest Division.		Headquarters.		Area (in acres).
1. Chaibasa	..	Chaibasa	..	1,32,154.73
2. Dhalbhum	..	Jamshedpur	..	3,07,524.00
3. Porahat	..	Chaibasa	..	1,90,250.42
4. Kolhan	..	Chaibasa	..	1,70,069.82
5. Saranda	..	Chaibasa	..	2,11,840.00
6. Dhanbad Afforestation.		Dhanbad	..	96,914.80
		Total	..	11,08,753.77

The total area of Singhbhum district is 5,152 square miles and includes 39 villages transferred after the last census of 1951 to this district from Tamar police-station in Ranchi district. It also includes the areas of Chandil, Patamda and Ichagarh transferred to Singhbhum district in 1956. Out of this area of 5,152 square miles the forests represent 11,08,753.77 acres or 1,732.44 square miles.

History of the Forest Department.

The history of forests over any tract of country is intimately connected with the history of its inhabitants. The district of Singhbhum in general but more particularly the tract comprising the Kolhan Government estate, was very heavily forested and the population was very sparse. Although the district was formerly the properties of the Rajas of Porahat, then known as the Rajas of Singhbhum, they exercised little control over the wild Hos or Larka Kols of the tract known as Saranda* and finally in 1836 after several expeditions had been made into the district to quell disturbances arising out of quarrels between the Raja and the Hos, who refused to acknowledge his supremacy, the Kolhan estate was placed under the management of the Government.

It is necessary to touch briefly on a few of the local customs in order to get idea of the condition of the forests at the time

---

*Vide *Saranda Working Plan, 1936-37 to 1955-56* by H. F. Mooney, I. F. S.

of their reservation and in order to follow the development of the forests to their present conditions.

The Ho is a man of very primitive instincts chief amongst which is his love of hunting. They were nomadic in their habits and it appears that they did not normally occupy a village site for more than 12 to 15 years at a stretch. They were poor cultivators and the process of raising rice by means of terraced and irrigated fields was not so much in favour with them. In those days they eked out a precarious existence by primitive forms of cultivation and by hunting. Their cultivation took two forms, namely (*i*) *purunga* or *jhuming* proper for lands on the upper and steeper slopes of the hills, and (*ii*) *gora* or dry cultivation of the lower slopes or level lands in the valley and seldom far removed from the village site. These differed in many respects and also in their results.

In *purunga* cultivation a patch of forests is cleared and one or two crops are raised. After getting one or two crops the cultivator moves on to another area and repeats the process. Depending on the extent of forest area available and the number of cultivators a return to the area once cultivated may not be made for several years.

The *gora* cultivation, on the other hand, is a kind of semi-permanent cultivation and is usually practised on gently sloping land or at the bottom of valleys where the depth of the soil is sufficient to permit it. Here the practice is to fell the trees in the forest, burn the felled produce and mix the ashes with the soil. The area is then cultivated. In subsequent areas the fertility is improved by bringing litter from the adjoining forests, burning it and mixing the ashes with the soil, but in course of time the area is degraded and becomes unfit for cultivation. The cultivator will have to move to another area in about ten years' time.

Most of the forests in the district were subjected in the past either to *purunga* or to *gora* cultivation. The effects of *purunga* as far as forests are concerned are not nearly so serious as those of *gora* cultivation as the latter is of a semi-permanent nature. Much of the original forest has only been coppiced and soon re-appears. The superficial layer of the soil (or part of it) gets washed away exposing the loose stones beneath. But some surface soil remains and it is loose and not hardened as in the case of *gora*. Areas subjected to *purunga* may after 50 to 100 years, if not disturbed again in the meanwhile, become clothed with even aged, well-stocked crops of *sal*. It is probable that where *purunga* has been repeated more than twice the quality of the resulting forest crop deteriorated; but nowhere does one find the same degradation as in the case of more frequently cultivated lands below. The rotation for *purunga* in areas where it is still carried out is

two years' cropping followed by twelve to fifteen years' rest during which time the forest grows up. After two or three rotations, especially if the soil is poor, the forest tends to revert to scrub usually with an invasion of *woodfordia*, *holarrhotena* and *wendlandia*.

Large tracts of the district are comprised of jungle-covered hills striking fairly consistently north-east and south-west. Most of the higher ridges exceed two thousand feet, gradually rising towards the south-west where they culminate in the Sasangdaburu, three thousand feet above sea level. The bulk of the forest tract is situated between 1,000 to 2,000 feet elevation, the highest point being 3,041 feet on the Sasangdaburu. The rocks are of Archaean age and referable to the Dharwar system. They show no signs of subsequent submergence although they have been subjected to considerable tectonic movements.

The first investigation into the question of reserving forests in Chotanagpur was sponsored by Dr. Anderson, the Conservator of Forests, Bengal in 1864. The forests of Singhbhum district were examined by Captain Losack, Deputy Conservator of Forests in 1870-71 and again by Mr. Davis, Deputy Conservator of Forests in 1879-80. The latter especially commented on the damage done by fires and resin-tapping.

Following the earlier inspections, the work of selection and demarcation was taken up; the work being carried out chiefly by Messrs Fuchs, Heining, Manson and W. Johnston.

By notification, dated the 10th August, 1875 (under Act VII of 1865) Saranda *Pir* was declared reserved forest. It was, however, omitted from the notification, dated the 23rd January, 1879, under se tion 4, Indian Forest Act of 1878, as the Conservator was of opinion that the area should be further examined. An area of 1,99,740 acres (as originally estimated) was notified under section 4 on the 26th November, 1880 and was finally declared reserved under section 19 on the 17th May, 1882 with effect from the 1st April, 1882. A small addition of 1,370 acres was made with effect from the 1st October, 1888. Although Saranda was notified as a reserve with effect from 1882 and the demarcation was reported as complete in 1881, parts of the boundaries long remained uncertain. The tract borders on the former States of Keonjhar, Bonai and Gangpur, and the boundaries of these States were notified as the boundaries of the forest. The State boundaries, however, were not clearly marked on the ground and the Keonjhar boundary was not finally demarcated till 1899.

There remained a certain element of doubt as to the correct boundaries of the reserve until the completion of the forest survey in 1903, which clarified the position. A small dispute on the former Bonai State boundary, involving 166 acres, was settled in favour of Saranda in 1912.

The history of the protected forests dates back to 1903—1905 when 17 blocks were declared protected. Subsequent to that there were various additions and modifications both in regard to area and to the status of the forests.

The Kolhan forests were separated in 1906 forming the Chaibasa Division. On the completion of demarcation in 1880-81, the forests of Singhbhum were attached to Hazaribagh, the Singhbhum Division comprising the present Saranda, Kolhan and Porahat Divisions being formed in the following year. In 1884-85 the Chotanagpur Division was constituted which embraced the whole of Singhbhum, Palamau and Kodarma. The Singhbhum subdivision, in charge of a Gazetted Officer, consisted of three ranges, namely, Saranda, Kolhan and Porahat. Thus in 1885 the 306 square miles of Saranda constituted but one range in charge of one forest ranger, three forest guards and six chaukidars. The first incumbent of this responsible charge was Abhiram Tung, the Jagirdar of Manoharpur.

A separate Singhbhum Division was created in 1890 consisting of four ranges : Saranda, Kolhan, Chaibasa and Porahat. Saranda range was divided into Samta and Koina in 1893-94. The arrangement continued till the separation of the Kolhan protected forests to form the Chaibasa Division in 1906-07. With effect from the 4th May, 1912 the Saitba, Santara and Latua blocks were transferred to the Kolhan (formerly Chaibasa) Division.

A reconstitution of divisions in the Singhbhum district was effected from the 1st October, 1916, whereby all the forests in the Porahat estate were removed from the Singhbhum Division to the Porahat Division whilst the Saitba, Santara and Latua blocks were retransferred from the Kolhan to the Singhbhum Division.

Again from the 1st April, 1924 the Singhbhum Division was split up into independent divisions called the Kolhan and Saranda Divisions, the former comprising the Saitba, Santara and Kolhan ranges and the latter the Koina, Samta and Tiriljposi ranges. The unwieldly Koina range was divided into Gua and Koina ranges in 1927, but in 1931-32 Samta and Tirilposi ranges were amalgamated.

Thus by the 1st April, 1924 four forest divisions had been constituted with headquarters at Chaibasa, for the purposes of control and management of all the reserved and protected forests situated within the district of Singhbhum. With effect from the 23rd December, 1936 (vide Government of Bihar, Revenue Department, notification no. 10149-VIF-29/36-R., dated the 22nd December, 1936) the fifth forest division, known as Dhalbhum Division, was formed with headquarters at Ghatsila and all the forests were taken over from the Zamindar of Dhalbhum estate. He had

applied under section 38 of the Indian Forest Act for management of his forests by Government and these along with about 14 square miles of protected forests situated in the Manbhum district were placed under the control and management of the newly constituted Dhalbhum Forest Division. By about the same time, and under similar circumstances, the forests belonging to the Zamindars of Kera and Anandpur were taken over and formed into separate forest ranges of the same names and now these two ranges form part of Porahat Division. When in the year 1946 (vide Government notification no. 6565-VIF-59-R., dated the 11th July, 1946) Manbhum Forest Division was formed the 14 square miles of the protected forests referred to above were transferred from Dhalbhum Forest Division to the newly constituted Manbhum Division.

When the new Bihar Private Forest Act came into operation in 1947, the remaining private forests, although much of them had been devastated by then, were also notified and finally taken over for management by Government. Consequent upon the merger of Seraikela and Kharsawan States with the State of Bihar the forests of the said two estates were taken over and formed into two separate ranges of the same names; these two ranges now form part of Dhalbhum Division.

The forest areas of Chandil, Ichagarh and Patamda police-stations of the former Manbhum district now form part of the forests of this district since 26th October, 1956 when these police-stations were transferred to Singhbhum as a result of States Reorganisation Commission's report. The forests of Patamda police-station measure 33,938.85 acres and lie in the Mango and Chandil ranges. The total forest areas of Ichagarh and Chandil police-stations are 62,975.95 acres and they are also included in the former ranges. Thus the total area of the forests of these police-stations are 96,914.80 acres. For administrative purpose they are included in the Dhanbad Afforestation Division.

After the abolition of the Zamindari the private forests of the district vested in the State of Bihar under the Indian Forest Act. There are only two types of forests, namely, protected and reserved and other classifications are now superseded.

VEGETATION.

These forests are found scattered throughout the district but the bulk lies in south and south-western parts where it runs unbroken in long stretches covering a number of steep rocky hills and intervening valleys. This type of topography becomes a determining factor in the distribution, nature and type of vegetation which varies from a dry thorny type on very dry, exposed, badly eroded rocky hills to semi-evergreen type in sheltered damp valleys. But apart from these two extreme types, the ruling vegetation is

moist tropical deciduous forest which tends to become dry deciduous on ridges and exposed spurs on open southern aspects.

Sal (*Shorea robusta*) is by far the most important and prominent tree species and grows gregariously and in almost all types of soil. In favourable localities it attains a massive size with a height of 130 feet to 150 feet, while in shallow soils and exposed areas it remains a stunted crooked tree of 50 feet. The forests of Saranda *Pir* and near about grow *sal* of finest quality and are the best *sal* forests of Bihar, a few patches being superfine and matchless in India. In general, most of the forests of this district bear a good crop of *sal*.

Other tree species which are found associated with *sal* are *asan* (*Terminalia tomentosa*), *dhaura* (*Anogeissus latifolia*), *jamun* (*Syzygeium jambolana*), *bija* (*Pterocarpus marsupium*), *karam* (*Adina crodifolia*), *simul* (*Salmalia molafarica*), *kendu* (*Diospyros melanexylon*), *arjun* (*Terminalia arjuna*), *gamhar* (*Gmelina arborea*) and bamboos.

In dry open hills *sal* totally disappears, giving place to a dry mixed forest of *salai* (*Boswellia serrata*), *jhingan* (*Lannea grandis*), *Sterculia urens*, bamboo (*Dendrocalamus strictus*), *sabai* (*Eulalzopsis binata*) and *Imperata arundinacea* are commonly found on hills and ridges.

Mahua (*Bassia latifolia*) and *kusum* (*Schbeichera trijuga*) are present around cultivation and in villages. Bamboos are present in sufficient quantities in the forests, the main species being *bans* (*Dendrocalamus strictus*) while thorny bamboo (*Bambusa arundinacea*) is also found in small quantity.

The majority of the forests of the Afforestation Division, Dhanbad lie on hills. *Sal* (*Shorea robusta*) is the predominating species of this region, *asan*, *kend*, *bahera*, *sidha* are also found.

FAUNA

Elephants are frequently met with in the forests of this district and their number seems to be on the increase. Wild elephants are common in the jungles on the Dalma range in the north of the district. Heavy damage is caused mainly in rains to cultivation, young bamboo clumps and regeneration areas. In drier periods of the year they confine themselves to damp valleys. Bisons are present but in more interior areas except in the rains when they are seen roaming about in open areas. Sasangda plateau of Karampada block may be mentioned in this respect where all kinds of animals may be seen roaming about especially by the end of rains.

Tigers and panthers are present but make very rare appearance. At times they do attack village cattle and in stray cases human beings. Bears are present in large number and attack at times

human beings and do heavy damage to crops and fruits. Pigs are present in fairly large number and cause damage to cultivation. Wild dogs are seen frequently.

Sambhar, barking deer and spotted deer are present but their number is decreasing especially in forests adjoining habitation.

The reasons for the slow decrease in the number of *sambhar* and deer are several. With the opening out of the forests, the incidence of breeding of game has gone down. The Ho with his bow and arrow and his great fondness for hunting will not fail to kill a deer if he gets a chance. The practice of shooting from motor cars at night with the help of spot-light, though this is prohibited, is still prevalent and is another cause of the decrease of game.

Reptiles.

Among reptiles, snakes both poisonous and non-poisonous are common. The following are the common snakes of Singhbhum :—

(1) The python.

(2) The common cobra (*Naia naia*).

(3) The king cobra (*Naia hannah*).

(4) The white striped coral snake (*Doliophis bivirgatus*).

(5) The common *karait* (*Bungarus coeuruleus*).

(6) The banded *karait* (*Bungarus fasciatus*).

(7) The black *karait* (*Bungarus walli*. Possibly occurring).

(8) The house snake (*Lycodon aulicus*). (Common and invariably mistaken for the *karait*. It is harmless.)

(9) The green pit viper (*Trimeresurus gramineus*).

(10) Russell's viper (*Vipera russelli*).

(11) The slender coral snake (*Calliophis trimaculata*).

(12) *Dipsas trigonata* (A harmless snake with the head of a viper, but it has large scales on the head. The bite causes intense thirst).

(13) The common grass snake (Harmless).

(14) The *dhaman* (Harmless).

(15) The *garait* (Harmless).

Forest Products and their Revenue.

Sal being the principal product of the forest of this district, it is extracted both as entire logs as well as in manufactured forms. Manufactured *sal* is extracted mainly as sleepers for broad gauge, meter gauge and for special sizes which are in great demand with the

railways and form a great bulk of the products. *Sal* logs are also in great demand with railways, boat builders and other purchasers. *Sal* scantlings, poles, props, boards, and beams are also extracted in fairly large quantities and are consumed in local towns, and in the innumerable mines and are exported to outside markets for constructional purposes.

Timber of miscellaneous species like *karam, jamun, bija, toon, gamhar*, etc., is consumed locally or in nearby markets for building construction, furniture, etc., *Semal* and other softwood species are extracted in small quantities and are supplied to *W. I. M. Co.*, and plywood manufacturers. Quite a good percentage of their forests are worked for firewood which is in great demand in local towns and industrial centres. From interior parts where it becomes uneconomical to extract firewood as such it is converted into charcoal and exported to towns for cooking and smithy work, etc.

Bamboos which are found in fairly large quantity are used locally for house building but are chiefly railed to paper mills as well. *Sabai* grass forms an important forest produce and is consumed readily by paper mills. It is also utilised locally for string-making.

It was feared that ecological retrogression caused by the general desiccation of the district was lending itself to a diminution in the yield of *sabai* grass from the Government forests, but closer examination has revealed that the diminishing yield is due to insufficient exploitation rather than to an adverse change in the crop. This grass is a most useful commodity; it serves household purposes but is exported mostly for the manufacture of paper. It provides livelihood to an appreciable number of workers in the district.

Sabai grass is not invariably found in all the six forest divisions of the district. In the Chaibasa and Dhanbad Afforestation Divisions this grass is practically non-existent while in the Porahat Division it is only found in the Anandpur Range. The average annual yield of *sabai* grass from Porahat Division amounts approximately to 200 maunds. The total yield of the other three divisions is given below:—

(Yield in maunds.)

Name of Division.	1952-53.	1953-54.	1954-55.	1955-56.	1956-57.
Dhalbhum ..	600	740	830	500	648
Kolhan ..	17,504	25,055	17,687	11,105	15,524
Saranda ..	21,226	Figures not available.	16,645	8,339	Figures not available.

Lac and *tassar* cocoons are reared in large quantities by villagers on trees in protected forests or on tree on their own agricultural land.

The revenue derived from the different forest products of each division from 1952-53 to 1956-57 is given in the table below :—

Forest revenue of the Porahat Division.

Forest Products.	1952-53.	1953-54.	1954-55.	1955-56.	1956-57.
	Rs.	Rs.	Rs.	Rs.	Rs.
Timber ..	3,42,689	3,27,386	6,05,018	6,86,558	3,15,612
Firewood and charcoal.	19,830	23,594	25,301	32,856	19,840
Bamboos ..	12,711	32,977	31,418	33,163	44,550
Grazing and fodder grass.	30	154	..	..	..
Other minor produces.	24,569	57,441	66,197	55,973	71,632
Total	3,99,829	4,41,552	7,27,934	8,08,550	4,51,634

Forest revenue of the Saranda Division.

Forest Products.	1952-53.	1953-54.	1954-55.	1955-56.	1956-57.
	Rs.	Rs.	Rs.	Rs.	Rs.
Timber ..	10,97,180	11,23,605	13,53,729	15,36,375	12,45,532
Firewood and charcoal.	94,172	73,479	1,01,626	73,201	1,01,361
Bamboos ..	16,656	22,135	26,348	26,439	31,106
Grazing and fodder grass.	975	440	277	295	225
Other minor produces.	10,849	21,754	18,934	11,550	17,081
Total ..	12,19,832	12,41,413	15,00,914	16,47,860	13,95,305

Forest revenue of the Kolhan Division.

Forest Products.	1952-53.	1953-54.	1954-55.	1955-56.	1956-57.
	Rs.	Rs.	Rs.	Rs.	Rs.
Timber ..	4,00,281	2,85,840	4,23,540	4,13,564	3,47,104
Firewood and charcoal.	56,502	69,292	42,178	78,586	65,358
Bamboos ..	108	128	97	110	86
Grazing and fodder grass.	3	15	2	..	..
Other minor produces.	61,105	44,957	13,359	34,393	42,060
Total ..	5,27,149	4,00,232	4,79,176	5,26,653	4,54,608

Forest revenue of the Chaibasa Division.

Forest Products.	1952-53.	1953-54.	1954-55.	1955-56.	1956-57.
	Rs.	Rs.	Rs.	Rs.	Rs.
Timber ..	1,26,535	1,49,377	1,14,329	1,82,392	2,03,036
Firewood and charcoal.	87,485	97,490	1,07,482	1,85,254	1,70,199
Bamboos ..	..	..	..	..	..
Grazing and fodder grass.	770	182	124	3,942	499
Other minor produces	1,550	20,841	30,635	2,305	30,758
Total ..	2,16,340	2,76,890	2,52,570	3,73,893	4,04,512

Forest revenue of the Dhalbhum Division.

Forest Products.	1952-53.	1953-54.	1954-55.	1955-56.	1956-57.
	Rs.	Rs.	Rs.	Rs.	Rs.
Timber ..	2,13,358	1,91,172	1,82,251	2,16,189	2,90,525
Firewood and charcoal.	1,79,324	1,33,416	1,32,867	1,68,336	2,22,317
Bamboos ..	3	623	611	543	604
Grazing and fodder grass.	2,154	453	366	580	347
Other minor produces	71,267	50,153	80,983	51,956	2,10,505
Total ..	4,66,106	3,75,817	3,97,078	4,37,604	7,24,298

Forest revenue of the Dhanbad Afforestation Division.

Forest Products.	1952-53.	1953-54.	1954-55.	1955-56.	1956-57.
	Rs.	Rs.	Rs.	Rs.	Rs.
Timber ..	26,410	3,775	2,750	15,955	25,834
Firewood and charcoal.	26,410	3,775	2,750	15,955	25,834
Other minor produces	2,200	1,440	4,290	..	..
Total ..	55,020	8,990	9,790	31,910	51,668

The revenue derived from the different forest products of the different Divisions for 1957-58 for different items is shown in the Appendix to the book.

It may be mentioned here that the *sabai* grass yield in maunds for 1957-58 for Kolhan and Saranda Divisions is 40,000 maunds. The figure for Dhalbhum Forest Division for the same year was 150 maunds.

These figures, however, convey no idea of the capability of these magnificent forests. The dividend of the forests can increase considerably if proper exploitation can be made. As a whole, during the past five years, the gross revenue of the forest products has gone up from Rs. 28,29,256 in 1952-53 to Rs. 34,30,357 in 1956-57, when the surplus was Rs. 6,11,101*.

A list of the forest bungalows of the Singhbhum district is given below :—

(1) *Saranda Division*—Tholkobad, Kumdi, Chotanagara, Salai, Jeraikela, Manoharpur, Ankua and Nowagaon located in the villages of the respective names.

(2) *Kolhan Division*—Barkela, Saitba, Bamiaburu, Goilkera, Luia, Posaita, Patung, Rajabassa and Kurkutia located in the villages of the same names.

(3) *Porahat Division*—Chakradharpur, Sonua, Rogod, Jate, Serengda, Jonko, Orenga and Jarakel in the villages of the same names.

(4) *Chaibasa Division*—Roro, Kharbandh, Kotgarh, Bombasai, Bidri and Tonto in the respective villages.

(5) *Dhalbhum Division*—Musabani, Dhalbhumgarh, Dublabera, Kalikapore, Kandra, Kuchai, Hurangda, Dumaria, Gurajhore and Mango (Jamshedpur).

*In this analysis the figure of the Dhanbad Afforestation Division is not included.

POSSIBILITY OF DEVELOPMENT.

There is an extensive scope for development for the forest of this district. The methods of extraction and conversion are still primitive and do not permit of economic exploitation of many products. The difficulty in extraction from interior parts leads to wasteful methods of conversion. Extraction of big logs, beams and sleepers alone pays while the small timber, firewood and even poles are left to rot and decay in the forest. All these products can be brought to the market by using better methods of conversion and extraction and by making more wagons available. There is also a great scope for developing trade in minor forest produce such as, myrobalans, barks for tanning industry, tubers for manufacture of starch, medicinal herbs and roots (like *chiraita*) used in the manufacture of indigenous drugs, etc.

Various measures have been undertaken by the Forest Department for improvement of the forests. The introduction of more intensive management has led to better utilisation of the forest produce while intensive silvicultural operations improve the crop itself. These measures include introduction in the early twenties of a uniform system for the better classes of Singhbhum forest and prescription of intensive cleaning and thinning.

AVIFAUNA.

The avifauna of Singhbhum is of more than local interest because this district is the southernmost of the three of Bihar which lie wholly in the peninsular zoo-geographical zone. This location results in a large number of peninsular birds in it. Due to the proximity of the area to the plains of West Bengal which are in the Indo-Gangetic zoo-geographical sub-region there are Indo-Gangetic birds. Many Assamese, Indo-Burmese and Indo-Malayan species also occur. The Central Indian species are well represented. Some birds found in the Himalayas and the Western Ghats are also found in Singhbhum.

Those who are particularly interested in the avifauna of this district would find the following contributions of considerable interest :—

(1) S. R. Tickell's article published in the *Journal of the Asiatic Society of Bengal*, Vol. II, 1833.

(2) Edward Blyth's "Some notes on birds forwarded to the Museum from Chaibasa by Tickell" in *Journal of the Asiatic Society of Bengal*, Vol. XI, 1842.

(3) V. Ball's "Avifauna of Chotanagpur" in *Stray Feathers*, 1874-1875.

(4) Jamal Ara's "Birds of Kolhan Forest Division" in *Journal of the Bengal Natural History Society*, Vol. XXVI, 1953.

The district of Singhbhum has a wide expanse of forests. The two main habitats in the district are :—

(1) forests of the western part—Kolhan, Porahat, Saranda and south-eastern part; and

(2) open country.

In the open country there is only one large built-up area, that of Jamshedpur but it is well provided with gardens and trees and being near the Dalma Hills has a bird population very nearly the same as that of village scrub and fringing jungles. The built-up area has its influence in the abundance of species which do well in human habitations, crows, *mynahs*, *bulbuls*, sparrows, kites and vultures.

There are few large stretches of water. The only big one is the Dimna reservoir which has an indirect influence on bird life. It induces humidity and the surrounding forest has a bird population approximating that of evergreen patches along major streams in the main forest area. A noticeable bird of the Dalma area is the large green-billed *malkoha* (*Rhopodytes tristis*), a shy long-tailed member of the cuckoo family. This bird can be recognised easily because of a long black tail spotted with four pairs of large white patches. The rest of the bird looks black, especially because of the poor light in which it is generally seen. The flight is feeble.

Other stretches of water are the large tanks near Chaibasa on which swallows and a few teals can be seen during winter. Deep down in the forest where the Karo is the boundary between the Kolhan and the Saranda Forest Divisions river terns are quite common.

The cultivated area lacks in cover and shelter. Most of the birds nest in trees in villages and such birds of course are only the crows, *bulbuls*, *mynahs*, drongos, sparrows, kites, vultures, herons and storks. Occasionally a pair of Jerdon's *chloropsis* or oriole may be found.

The typical birds of the cultivated area, that is those which live and nest in the fields, are the larks, wagtails, *pipits*, and bee-eaters. Strikingly noticeable in the open country of Dhalbhum is the ashy-crowned finch lark (*Eremopteryx grisea*) which often flits above the field. It is much like the sparrow but has a black underside which cannot be missed. In the rocky areas the Indian robin and the redstart are quite numerous.

The scrub and village fringing is the belt where the open country and the forest meet. The bird population of this belt is largely of the village but a few more typically forest forms are met with, for example, the chloropsis, woodpeckers, lapwings and shrikes. Typical birds of the scrub and fringing are the *dayal* and the crow-pheasant. The *dayal* is a black and white robin-like bird, one of the best songsters.

The forests fall into some broad biotypes or habitats, namely, the dense valley *sal*, the lighter hill *sal*, the dense evergreen associations along major streams, *terminalia* associations and the rather open miscellaneous woods on dry hill aspects. The bird population varies a great deal from one part of the forest to another but a more detailed study is not necessary here.

The birds of the forest are generally more gorgeously plumaged and long-tailed than those of the open country. That is a function of cover. Among the beautiful birds of the forest are the *chloropsis*, the gold-fronted and Jerdon's. The two birds are so green that they are often described as leaf birds. One is wholly green while the other has a golden forehead (*Chloropsis aurifrons*).

The minivets are the striking red birds but only as far as the males are concerned; the females are as brilliantly yellow as the males are red. The smaller type is often in flocks, but the larger, or scarlet minivet, is more often seen in pairs—red and yellow birds together. The trogon is another red bird and is seen in deep forest.

According to zoning some of the birds of the district are as follows :—

(1) Tree tops *chloropsis*, black-crested yellow *bulbul*, minivets, large racket-tailed drongo, oriole, grackle, green pigeon and purple wood pig.on. (2) Lower canopy-gray tit, iora, *bulbul*, flycatcher, sparrow, yellow-backed sunbird, purple-rumped sunbird and woodpeckers. (3) Tree trunks-nuthatch, creeper and pigmy woodpecker. (4) Undergrowth-babbler, *bulbul*, *dayal*, *shama*, blackbird and thrush. (5) Ground-wagtail, *pitta*, sirkeer, nightjar, peafowl, jungle fowl, partridges, courser and lapwing.

The historical interest of the Singhbhum area in orinthology is the fact that it was one of those areas studied in detail very early, between 1833 and 1840 by Tickell. Many species not known before were described by Tickell and so for many species the type locality is Dhalbhum or Chaibasa. Three of these might be mentioned here : the long-tailed nightjar (*Caprimulgus macrurus*), the brown hawk-owl (*Ninox scutulatus*) and purple wood pigeon (*Columba punicea*). Tickell found purple wood pigeon at Chaibasa. Deforestation has destroyed its habitat and some specimens are now found at Bamiaburu sanctuary.

The following birds noticed before are definitely uncommon now : black *bulbul*, ashy swallow-shrike, black and red headed bunting, yellow backed sun bird, green-breasted *pitta*, forest eagle-owl, green imperial pigeon, the Indian courser and the rosy pastor.

The status of the following birds is problematic. The yellow-breasted babbler mentioned by Ball has not been seen again during the last eighty years and may, therefore, be presumed as extinct unless fresh evidence of its existence in the district is forthcoming. A white-winged wood duck, a resident of Assam was shot at Sini several decades back by Sir John Houlton, I. C. S., when he was a Settlement Officer there. We cannot claim it as a Singhbhum bird or even a bird of Bihar. There is no recent evidence about the occurrence in Singhbhum of the jungle owlet. White-cheeked *bulbul* which was once fairly common has almost become extinct. Several years back Mr. P. W. Augier, a retired Conservator of Forests saw a specimen in Kodarma forests.

Among the birds that are not seen now are great bustard (*Choriotis nigriceps*), likh floriken (*Syphoetides indica*), white-winged wood-duck (*Asarcornis scutulatus*) and pink-headed duck (*Rhodonessa caryophyllacea*). The wood-duck was last seen at Sini.

There are three outstanding songsters, grackle, *shama* and the *dayal*. In the months of April and May the forests at Tholkobad are filled with the beautiful liquid notes of the grackle.

The following are taken to be the most beautiful birds of the area:—racket tailed drongo, paradise flycatcher, scarlet minivet, golden and black-headed oriole, pea fowl, yellow-cheeked tit, and black-crested yellow *bulbul*. The beautiful large racket-tailed drongo, which is more typical of the heavy forests of Assam is found along the valley of the Karo between Goilkera and Poseita. Another such bird is the black-crested yellow *bulbul*, a very beautiful yellow and black bird, which is plentiful in the forests above Jate in the Porahat.

Other remarkable specimens among Singhbhum's forest bird are the pied hornbill and the nightjars*.

---

* Some of the recent botanical name changes are given below—they apply for Chapter I as well:—

1. Butea frondosa = Butea monosperma.
2. Bassia latifolia = Madhuca indica.
3. Schleichera trijuga = S. oleosa.
4. Phyllanthus embtica = Embtica officinalis.
5. Zizyphus jujuba = Z. mauratiana.
6. Pongamia glabra = P. pinnata.
7. Poinciana regia = Delonix regia.
8. Croton sparsiflorus = C. bonplandianum.
9. Cochlospermum gossypium = C. religiosum.

CHAPTER V.

AGRICULTURE, LIVESTOCK AND IRRIGATION.

*AREA AND ITS CLASSIFICATION.

According to *Bihar Statistical Handbook,* 1953 the total area of the district in 1952-53 was 2,859 thousand acres. The total area has been classified in thousand of acres as follows :—

(1) Forest	14,35
(2) Not available for cultivation	2,00
(3) Other uncultivated land excluding current fallow	1,73
(4) Current fallow	2,72
(5) Net area sown	7,79

There is practically no area not available for cultivation because of water-logging.

According to the same book, the area under food-crops in 1952-53 was 6,62 thousand acres while under non-food-crops it was 1,55 thousand acres. The area sown more than once was 38 thousand acres.

These statistics are to be appreciated with reference to the area that has been reclaimed in the district. The land reclamation work was started in the year 1951-52 and since then up to 1956-57 an area of 10,854 acres has been reported to have been reclaimed through loans and otherwise. Out of such reclaimed lands an area of 1,010 acres has been converted into paddy fields with the help of subsidy given by the State Government for the reclamation of waste land having laterite soil.

AGRICULTURAL CONDITIONS.

Agricultural conditions vary considerably in different parts of the district. The northern and eastern portions of the district consist chiefly of a strip of country which, where not hilly, is undulating with an elevation of only 400 to 700 feet. Beyond this the ground rises till it becomes an elevated plateau, covering some 700 square miles of country, 1,000 feet above sea level, which extends southwards until it meets the hills of the Orissa feudatory estates, now merged in Orissa. The rest of the district, to the west and south-west, is a wild mountainous tract.

* Statistics mentioned under this head do not include the area falling under the police-stations of Chandil, Patamda and Ichagarh as such statistics for each police-station are not available. However, statistics for land reclamation do include statistics for these police-stations for the year 1956-57 only.

For practical purposes, the country may be divided into three tracts, first comparatively level plains, then hills alternating with open valley and lastly, the steep forest-clad mountains. In the past, cultivation was nomadic, the clearances being abandoned after a single crop had been harvested from the virgin soil, but this has been discouraged and extensive areas have been formed into forest reserves. The plains are embanked for rice cultivation; in the intermediate tract the valleys are carefully levelled where rice is grown while the uplands are roughly cultivated with millets, oil-seeds and occasionally with paddy.

The people have changed their nomadic habits and have taken up cultivation on a more permanent basis. There has been a remarkable change in the outlook of the people and now there is an appreciation of the more modern methods of agriculture and need for irrigation.

RAINFALL.

The rainfall is ordinarily sufficient, but it is frequently capricious and its distribution unequal. This is well illustrated in Mr. Taylor's *Report on the Settlement of Porahat.* "Rainfall", he writes, "is most abundant in Anandpur and the Kolhan *Pirs* of the estate, where a loss of crops is rare. It is, however, sometimes capricious in the Sadant *Pirs,* especially in the Chakradharpur and Porahat *Pirs* causing occasional loss of crops. These *Pirs* are situated in a valley with parallel ranges of hills north and south of them; the clouds are not infrequently attracted across the valley; and the anxious cultivators have the mortification of seeing daily the moisture-laden clouds pass over their heads without discharging their much-coveted burden. In this tract one village may get a magnificent crop, while the rice on the neighbouring fields stands with erect and quivering ears parching in the sun." The average rainfall in the district is about 49 inches. The minimum temperature is 40°; while the maximum temperature is 116° (figures for temperature are based on the reading of two stations only, viz., Chaibasa and Jamshedpur). The temperature is sufficient for ripening of the various crops grown in Singhbhum district.

AGRICULTURAL SEASONS.

The main agricultural seasons are *rabi, aghani* and *kharif. Rabi* operations commence in the latter part of October and terminate by the middle of March. *Kharif* season commences in the latter part of May and terminates by the end of September. The *aghani* season begins simultaneously with the *kharif* crop and terminates by end of February. During *rabi* season wheat and gram are grown and harvested. During *kharif* season paddy, maize and pulses are grown and harvested. During *aghani* only winter rice is harvested.

Soil.

The soil of the district is formed from Dharwar rocks which come under latosal group of soil. It may be further classified as follows on the basis of colour and fertility :—

(*a*) rocky soil,

(*b*) red soil,

(*c*) yellowish grey and grey soil, and

(*d*) black soil.

(*a*) *Rocky soil.*—Approximately 20 per cent of the area comes under this. It is not actually under cultivation. This type of soil is found throughout the district, wherever we come down the hills and hillocks and mostly in the southern, western and north-western portions of the district.

(*b*) *Red soil.*—After rocky soil comes red soil which is spread throughout the district. It covers nearly 35 per cent of the soil area. The texture of the soil is sandy and loamy in upland and midland respectively. Its fertility is poor and it is acidic. Only *kharif* crops and vegetables could grow. In lowlands or where irrigational facilities are available paddy is also grown. The average yield of paddy in uplands is 2 to 3 maunds, in midlands 5 to 6 maunds and in lowlands 6 to 8 maunds per acre.

(*c*) *Yellowish grey and grey soil.*—This kind of soil is found in the plains, between northern and southern mountains, mostly in the Sora'kela subdivision and in some portions of Dhalbhum subdivision. It covers nearly 40 per cent of the soil area in the district.

Soil in the uplands is yellowish grey in colour while in the lowlands it is only grey. Soil in the uplands is less fertile than in the lowlands but on the whole this kind of soil is more fertile than red soil. However, this type of soil is deficient in organic matter as well as in other major soil nutrients. At places alkaline patches are also found, locally known as *khirni mitti*. They do not allow crops to grow.

The average yield of paddy in uplands of this type of soil is 5 to 6 maunds, in midlands 8 to 10 maunds and in lowlands 12 to 15 maunds per acre.

(*d*) *Black soil.*—This type of soil is mostly found in the low-lands of Kolhan and south-west of Dhalbhum. It covers nearly 5 per cent of the area of the district.

This type of soil is rich in organic matter. Its colour is black, probably due to the deposit of organic matter coming with rain water from forest. The texture of the soil is loamy and clayey. It is very fertile and is found only in patches in several villages.

Mostly paddy is grown on this soil, but where irrigational facilities are available wheat and gram are also grown. The average yield of paddy is 20 maunds per acre.

As the land of the district is not plain and are in terraces, fertility in each type of soil varies from plot to plot.

Types of Land.

There are three kinds of lands in the district, namely, *gora*, *bad* and *bera*. *Bera* lands are those which are at the bottom of the valley and in depressions which receive the washings of the slope and are naturally irrigated. They are richest of all the lands, yielding good crops of winter rice followed occasionally by linseed, *khesari* and other pulses. The land just higher up the slopes are called *bad* lands and grow early rice, cereals, pulses and miscellaneous crops. The uplands which are composed of light soil are known as *gora* lands which are situated close to villages. Owing to their proximity to the village they are well manured and cultivated to give two crops annually while those situated at a distance from the village is more or less meant for pasture. Crops as *surguja*, *mung* and *urid* are grown on these *gora* lands. In the Kolhan there is a further practical distinction that the *bera* and *bad* lands are embanked, and the *gora* lands are not embanked.

In Porahat embanked rice land is called *don* and is classified according to its character and quality into *bera* or *garha*, *nali* or *adhgarha*, and *badi*. *Bera* or lands of the first quality are embanked lands, which being in the bed of the stream are copiously irrigated, and contain water practically all the year round. *Nali* are lands on the slopes of watercourses which receive a certain amount of irrigation and are intermediate in yield between *bera* and *badi*. *Badi* is practically embanked upland growing a precarious crop dependent on the rainfall. Each embanked field or *khet* usually consists of several plots called *kearis* or *aris*, and the embankment round each plot is called *ar*, *ail* or *ari*. *Gora* as in the Kolhan, is upland soil, and usually represents an intermediate stage between jungle and *don*.

In Dhalbhum the lands are divided into three main classes, viz., *bahal*, *kanali* and *bad*. *Bahal* as the word indicates, means the best rice lands situated at a very low level in which drainage water collects. *Kanali* or *nali* means rice lands made in the beds of small *nullahs* or streamlets. *Bad* lands are terraced rice lands, which are generally situated at a high level next to the *gora* or uplands. *Bad* lands also include some lands growing crops other than rice ,viz., *badha* or sugarcane fields, and *kalamati*, which grow vegetables and other valuable crops. Besides these, there are *bastu* or homestead lands, *udbastu* or cultivated *bari*

and *gora* or uplands growing cereals and pulses, such as *gora* or *aus dhan urid*, *mung*, *kurthi*, *kodo*, *marua*, *sarguja*, cotton, etc.

SOIL EROSION.

Due to the hilly condition of the country side the level varies from 1,500 to 500 feet above the sea level. The rapid flow of the water is responsible for soil erosion. The denudation of the forests has made the problem of soil erosion more acute. The soil which is prepared each year is liable to be washed away. On the sloping land the cultivators raise upland crops once in a year or once in two years and allow the soil to build up itself during the recess as the frequently ploughed land is more liable to erosion.

Both kinds of erosions , namely, gulley erosion and sheet erosion are common. Contour bunding is essential to stop sheet erosion of the soil. High level bunds along with contour bunding may stop gulley erosion. Individual cultivators make bunds and *ahars* for their own lands and try to prevent erosion. Any scheme for checking erosion at a large scale could only be sponsored by a State Department. With the merger of Seraikela area where heavy soil erosion had taken place owing to indiscriminate deforestation, the Forest Department is taking up afforestation as a check.

PRINCIPAL CROPS.

The area under principal crops in thousand acres during the year 1952-53 according to *Bihar Statistical Handbook*, 1953* and the figures for 1956-57 as reported by the Deputy Commissioner of Singhbhum are as follows :—

	1952-53.	1956-57.
Paddy	601	625
Wheat	3	3
Gram	9	11
Maize	18	25
Masoor	3	2.5
Arhar	8	6
Khesari	19	12.5
Peas	1	1.3
Non-food-crops ..	155	4.8

Paddy.

Both early and *aghani* paddy are the principal crops of the district. *Aghani* paddy is sown in *bera* lands by both broadcasting and transplanting. Early paddy is sown in *bad* lands.

*This does not include the area of the newly transferred police-stations of Chandil, Patamda and Ichagarh.

The character of paddy cultivation in Singhbhum district is determined by the physical features of the district. The character is entirely different to the character in the plains of North Bihar and South Bihar. The countryside in Singhbhum is undulating and broken by alternate ridges and depressions which for the most part form the channels of small streams. In most areas the land has to be made available for paddy cultivation by opening out and terracing the depressions and utilising the springs at their sites. For this dams are often constructed at the heads of the sites. With this support paddy is grown at the bottom or on the site of the shallow saucer-shaped hollows. In the latter case a certain amount of levelling has to be done and plots are cut out of the site of the ridges or slopes. The fields thus rise one above the other in a series of long low steps, but each step is generally broad and the ridge is very gradual. Small embankments are made to hold water round each plot and the water is retained until the crop ripens.

The poorer quality of paddy is grown on the uplands at the top of ridges and on the land which is not levelled or embanked at all and depends on the moisture of the rainfall alone.

There are three crops of paddy. Early paddy is sown broadcast in *bad* lands after the first fall of rain in June and reaped in August and September.

The *bhadai* and autumn paddy is sown in June in *bad* lands and is reaped towards the end of October and November. This crop is either sown broadcast or transplanted.

Winter paddy crop is sown in nursery early in July, and is transplanted in *bera* lands in the latter part of July and early August and reaped in December.

There is also a small crop of early paddy called *tewan* which is mainly grown in Teboghat and Tholkobad areas in the mountainous region. It is planted in embanked terraces in March and cut in July and August.

In the borders, e. g., Chakulia and Baharagora area, the features of the country resemble with the plains of Bihar and methods of cultivation are also like those of the plains of Bihar. The total output of paddy according to the *Bihar Statistical Handbook*, 1953 was 1,84,000 tons during 1952-53.

Rabi.

Very little of *rabi* crops are grown. Gram and wheat have been introduced in the last few decades. They are grown in the same fields after the harvest of paddy crops.

With the construction of minor irrigation works, *bundhs* and tanks the area under *rabi* could have been rapidly increased but

due to the acute problem of stray cattle very few people venture to sow *rabi* seeds . *Unfortunately people of this district let loose their cattle just after paddy is reaped with the result that no second crop is grown.*

Mung and *urid* grow on *gora* lands and their yield is not bad specially on the lands near the villages. The other *rabi* crops are *jowar*, *gondli*, *khesari* as catch crop and common peas.

Maize.

Maize is grown in small patches near homesteads and its yield is quite satisfactory. The cultivation of maize could have been easily taken up in larger areas, but the people in this district have not yet taken to maize. The total outturn of maize during 1952-53 was 4,000 tons.

Oil-seeds.

The principal oil-seeds are *surguja*, *rape*, mustard, *til* and linseed. They are grown on uplands.

Mustard is mostly mixed up with *surguja* for extraction of oil. Oil is also extracted from the seeds of *kusum* and the fruits of *mahua*. These are edible oils. Oils extracted from *karanj* and *neem* seeds are used for anointing the body and are said to have medicinal value. The Hos also sometimes use *mahua* oil in cooking.

Sugarcane.

Sugarcane is grown in a very small area, mainly in Government Agricultural Farm at Putida and in some plots in Dhalbhum. The outturn is negligible.

Cotton.

Cotton has practically lost its importance. Cotton was an important produce several decades before. An attempt has been made to revive its cultivation on a moderate scale.

The reason for the decline in the cultivation of cotton is due to non-availability of a proper market. The climate of the place does not seem to be very suitable.

Kudrum.

It is also grown in small plots for getting fibre for making ropes for domestic use.

Tobacco.

A small quantity of tobacco is grown only in some parts of Dhalbhum, Porahat and Seraikela. The produce is more or less for domestic consumption.

Vegetable.

Cauliflower, cabbage, tomato, raddish, carrot, beet are some of the new vegetables that are being grown now. Ten years

back these vegetables were practically unknown in Singhbhum district. Among the newly transferred police-stations, Chandil police-station has an investment of 500 acres under vegetables. It grows all kinds of seasonal vegetables, namely, bottle gourd, lady's finger, tomato, cauliflower, etc. They have a ready market at Tatanagar.

METHODS OF CULTIVATION.

Methods of cultivation employed are rather backward. To quote from Mr. Taylor's interesting description in the Porahat Settlement Report :—"The Kol is a very poor cultivator compared with the ryots of Orissa and other parts of Bengal. The fact is that he has never entirely outgrown the state of his prehistoric ancestors. He is a hunter who has been forced to agriculture by the contraction of the forest areas and a consequent decrease of game. The Kol's ideal cultivation is *jhuming*, pure and simple, and as he is probably inferior to none in the clearing of forest and the felling of trees, he stands pre-eminent as a pioneer, but there his value as a cultivator ceases. He will put in some labour in the damming of *nullah* beds and the construction of embankments, but once the field is roughly made, he is careless of keeping it in repair. He will prefer to spend his leisure moments in cock-fighting, hunting and dissipation to the levelling of his cultivation field." In this Report Taylor further observes :—"The field of a Kol is generally easily distinguishable from that of a Dikhu by its unfinished appearance, and I have seen many a good crop lost because its owner found it too much trouble to spend a few hours on the filling in of a breach in his *ail*. The trouble of weeding is an abomination to him, and he will not transplant unless obliged. The Kols in many places do not manure their wet cultivation at all, depending entirely on the silt contained in the jungle water, and the reason they have given me for not manuring is that the latter encourages growth of so many weeds and grasses. Probably the Kol will improve gradually in time, but not, I think, until he has to pay higher rates of rent for his upland cultivation than those settled at this settlement. One anna or two pice per *bigha* for *gora* are purely nominal rates, and are no check on his thriftless methods. To a race so careless and improvident as the Kol, the rent of his land should be sufficiently high to act as a spur to careful cultivation, and to discourage him from attempting to work a larger area than he is capable of managing."

The physical capacity of the cattle is very poor. The ploughs employed are of very small size, and the result is that only 5 inches of soil is turned over. Some improved implements have been introduced in the district by the Agriculture Department, but the agriculturists have not taken to them to any appreciable extent due to their low purchasing capacity and the weaker breed of

cattle they own. Newly introduced implements are Bihar junior ridger, Bihar three-typed cultivators, Bihar junior plough, Japanese weeder, etc.

A few gentleman-farmers of the district have taken up mechanised cultivation with tractors and about fifteen tractors are working in the district. Other agricultural machineries like bull-grader, sub-boilers, cultivators, etc., are also used by such farmers. Mechanised cultivation needs more finance and consolidated blocks of land. The physical contour of the district also makes mechanised cultivation rather expensive.

As regards mechanised irrigation, *rahats* and lift engine pumps are slowly finding their way. Lift engine pumps have proved quite popular with the people and more than one hundred of them are now in use.

Rotation of Crops.

Rotation of crops and crop combination are prevalent in the district. In uplands due to deficiency of soil, two years are taken to prepare the land when the land is left fallow but in the third year cereals are grown. In lowlands paddy is the single crop. and except that some *paira* crops like *khesari*, *kalai* and gram are grown each year. In *bari* lands and vegetable gardens, in the first year winter vegetables and maize are grown while in the second year vegetables common in the rainy season and peas are grown.

Manures.

Cow-dung still remains the principal manure. Oil-cake is also commonly used. Weeds, dried leaves and twigs are usually burnt and the ashes used as manure. With the efforts of the Agriculture Department the cultivators are slowly taking to the making of proper compost for manure purposes. Usually a mixture of cow-dung, ashes, leaves and refuse collected from the house-hold is used for the compost.

The Credit Agricole Depots at Chaibasa, Hatgamaria, and Chakradharpur in Sadar subdivision, Tatanagar and Chakulia in Dhalbhum subdivision and Gamharia in Seraikela subdivision have made chemical fertilizers available. The use of bone-meal, ammonium sulphate, ammonium nitrate and superphosphate is slowly coming into vogue.

Agricultural Implements.

Ordinarily *deshi* plough, harrow, spade, weeding-hook, sickle, basket, etc., are used.

A *deshi* plough costs about Rs. 7 and is used for inter-culture operations. It has been estimated that there are about 1,16,915

ploughs in the district*. Harrow, locally known as *henga*, is used mainly for levelling the field. The approximate cost of a harrow is Rs. 6. It is pulled by bullocks. Spade, locally known as *kudal*, is used for preparing the field along with the *deshi* plough for inter-culture operations. It is also very necessary for the making of channel, pits and the ridges of the fields. The approximate cost of a spade is Rs. 3. Weeding-hook, locally known as *khurpi*, is used mainly for weeding out unnecessary plants from vegetable gardens and costs about six annas. The sickle, locally known as *hasua*, is needed for harvesting operation and costs about six annas. For the purpose of lifting water from low to high level swing baskets are necessary. They cost about Rs. 5 each. There are facilities for repair and replacement of these common agricultural implements. Carpenters and blacksmiths are distributed throughout the district and there is no dearth of raw materials, e. g., wood, bamboo, scrap iron, etc.

*Mechanical implements, such as lift engine pumps, *rahat* pumps, tractors, Bihar implements such as Bihar ridging, Bihar cultivators, etc., as mentioned above, are slowly coming into use among the small class of gentleman-farmers. These are in use in the collective farms at Galudih, Ghatsila and other places.

SEED SUPPLY.

The cultivators usually keep by a stock of seeds sufficient to meet their requirement. The methods of storing seeds are indigenous and cannot be said to guarantee proper germination always. If the harvest is not sufficient there cannot be any storing of seeds. The Adibasis are also extravagant and cannot be always expected to keep by a stock of seeds.

The Co-operative Societies have started grain *golas* for the supply of seeds to the cultivators. The Agriculture Department maintain three depots at the subdivisional headquarters at Jamshedpur, Chaibasa and Seraikela where improved seeds are sold. About 7,000 maunds of improved seeds, mostly of maize, paddy, *rahar*, wheat, gram, vegetables and papaya on the average are sold per year.

The Agriculture Department has sponsored a Seed Multiplication Scheme. According to this scheme paddy seeds are supplied to the registered growers who are to multiply the same according to the agreement executed before the supply of such seeds. After harvest the cultivators are to sell the produce to the Agriculture Department at a fixed rate. The store purchased by this department is sold to other registered growers for multiplication. This scheme has not had much of success as the purity of the seeds supplied has not been maintained.

---

*Excluding the newly transferred areas.

Through demonstration units of the Agriculture Department the cultivators are shown the utility of improved seeds in comparison to the output of the adjacent blocks where local and inferior types of seeds are used.

Agricultural Operations.

Ploughing.—Generally two ploughings are done in Singhbhum district—one for the *kharif* season crops and the other for the *rabi* season crops. In some cases hot weather ploughings are also done to grow hot weather crops, namely, some vegetables like brinjal, gourd, spinachs, etc. The ploughings for the *kharif* crops begin just after the break of monsoon, i. e., in the latter part of May or in early June. Ploughings for *rabi* crops begin in the second fortnight of September and last up to November. Hot weather ploughings are usually done from the second part of January up to February in the areas where good irrigational facilities are available. The depth of the furrow is usually near about 5 inches and the furrow width varies from 4 inches to 6 inches. Deep ploughing is not possible partly due to hard soil and partly because of the ill-fed and short statured bullocks. The *deshi* ploughs are not efficient at power manipulation of the soil. Recently some improved ploughs, as already mentioned earlier, have been introduced which are responsible for the sufficient inversion and stirring of the soil.

Puddling.—Puddling is not carried on a large scale as transplanted cultivation is done on a limited scale.

Sowing.—Mainly there are two sowing times, viz., *kharif* and *rabi*. For the *kharif*, sowing begins from June lasting up to the middle of July. Sowing of *rabi* crops begins from November lasting up to middle of December.

Water draining.—Generally crops in the *kharif* season require draining off the water when there is abundance of rainfall and subsequent water stagnation in the plots.

Harvesting and threshing.—After sowing harvesting and threshing are important agricultural operations in addition to the minor agricultural operations like water-draining, weeding, etc., which precede harvesting. Sickle made by the village blacksmith is the instrument with which harvesting is done. Modern harvesting machines are used by only a few gentlemen in the district who have organised their farms on the modern lines.

Harvesting is followed by threshing. It is done with the help of cattle. The gathered crop is spread on the threshing floor and a batch of four to five cattle is tied to a pole, around which crop has been spread, and they are made to go round the pole till the grain is separated from the straw.

Storing.—Storing is carried out still on primitive methods. Generally the seeds are put in gunny bags and stocked one above another. In some cases, seeds are stored in special earthen or iron structures made like bins. In Kolhan seeds are stored in straw which is locally called *pura*. Insecticides are seldom used in storing seeds.

CROP DESTRUCTION, PESTS AND DISEASES.

The common crop diseases prevalent in the district are *ganahi* bug, *kharika* and *dadhina* in paddy, rust in wheat, stem borer and caterpillar in vegetables, wilt in maize and red-rot in sugarcane. The menace of locust is not much known. Rat nuisance is prevalent. Wild animals, such as elephants, boars, bears and deer are responsible for a considerable amount of loss of crop. As usual with the other districts of the State the nuisance of stray cattle is common. Cattle were accustomed to be let loose in the forest areas for grazing. Now with the introduction of Forest Acts, they are not allowed to graze in the forest areas with the result that they are often let loose to graze on cultivated plots.

Insecticides are coming into use as preventive measure. The insecticides mainly in use are gammexane guarole 550, pyrochloride, benzoine hydrochloride, D.D.T., etc. The cost , however, comes to about Rs. 6 to Rs. 8 per acre, and has been a handicap to the ordinary cultivators. The use of insecticides has not yet become popular. There are no rifle clubs in the district. Shooting of wild animals and monkeys for crop protection is awarded by the State with a small cash honorarium.

AGRICULTURE MARKETING.

The markets of the district are both of primary and secondary types but the former predominates the latter. Various weekly *hats* are held in the district where the commodities of necessities of life are sold invariably at a cheaper rate than in the regular market price. The *hats* and *melas* are dealt with separately in the chapter 'Directory'. Chaibasa, Jamshedpur, Chakradharpur, Musabani, Gua, Noamundi, Chandil, Seraikela, Sini and Kharsawan are the important markets of the district where all types of commodities are sold.

WEIGHTS AND MEASURES.

The weights and measures commonly used are not standardised, but vary in different parts of the district. Traders usually use the standard seer of 80 *tolas* in selling but a seer of 84 *tolas* in purchasing, and this second seer is common throughout the district. Another common weight is the *paila*, which varies, however, from 10 standard *chattacks* to 1¼ standard seer. In the Kolhan area it is equivalent to a seer of 84 *tolas*. which is

regarded as the standard measure. Taking the latter as a basis, the table of weights used in the Kolhan is shown as follows :—

1 *paila* = 84 *tolas*.

2½ *pailas* = 1 *pai*.

20 *id* = 1 *khandi* or *bisi*.

In the south and south-west of that tract, however, 1 *khandia* is equal to 40 *pailas*. As a rule, dealers buy in *pais* and sell in *pailas* but neither has the fixed weight, its weight depending largely on the pleasure of the vendor.

In Dhalbhum a *pai* is equivalent to a *paila* of 1½ seers weight. The following weights are generally used by traders for paddy and rice :—

1 *pai* = 1½ seers.

8 *pai* = 1 *kuri*.

16 *kuris* = 1 *ara*.

1 *ara* = 4 maunds 32 seers.

The common measure of capacity is the *paila*, which is in use throughout the district and, as stated above, varies from 10 standard *chattacks* to 1½ standard seers.

LAND MEASURES.

The original unit of land measurement in the Kolhan was the *paran*, containing as much land as was usually sown by a maund of seed, and five *parans* made a *hal* or plough. The superficial area of *hal* measures was not precisely determined until 1866, when the size of the *paran* was, with the consent of the village headmen, fixed at 2,500 square yards which became the local *bigha*, an acre being equivalent to 1 *bigha* 18 *kathas* 14⅖ *dhurs* of the local measure. The unit of land measure prevalent in the Kolhan area is given in the following table :—

40 *pailas* = 1 *paran*.

1 *paran* = 2,500 square yards.

5 *parans* = 1 *hal*.

1 *hal* = 12,500 square yards.

In Porahat the local standard of measurement was the *hal*, which in the greater part of the *pargana*, meant the area of land which required 50 maunds of *dhan* to sow it. It, therefore, consisted of 50 *mans* or *khandis*, each of 40 *pailas*, and this was known as the *paran ka hisab*. As usual, it was also divided into annas and pies, an anna equivalent to 3⅛ maunds or *bigha*. At the same time there was the *dang* or pole of 15 feet by which the settlement of Porahat in 1880 was effected. One hundred

dang constitued a *bigha*, which was, therefore, 2,500 square yards and equal to .51 of an acre. The Anandpur *hal* was, however, 12 *bighas*, being roughly the amount of land which could be cultivated by one pair of oxen.

An account of the system of land measurement in Dhalbhum given by O'Malley in the last District Gazetteer of Singhbhum still holds good to a great extent and so is quoted here *in extenso* :

"The old unit of land measure in Dhalbhum is the *hal*, which is taken as equivalent to 16 annas of land, one anna again being equal to four pice of land. It is an indeterminate standard, for it means as much rice land as can be cultivated with a pair of bullocks in a year, e. g., a strong man with a strong pair of bullocks would plough more than an ordinary man with a pair of milch cows. Disputes about the area of the *hal* have consequently been not infrequent. It has, for instance, been claimed that a *hal* contains only 12 Dhalbhun *bighas* (explained below), but the settlement papers of 1868 and 1881 show that its size varies considerably even in the same village, while cases have come to light of a *hal* containing as much as 90 local *bighas*, and in 1884, during the settlement of the *ghatwali* lands, it was taken as equivalent to 40 Dhalbhum *bighas*.

"The system of measurement by *bighas*, *kathas* and *gandas* was introduced for the first time by Raja Chitreswar Dhal in 1861. One *bigha* was taken to be the square of a rope measuring 90 cubits or 45 yards, and was, therefore, equivalent to 2,025 square yards or 0.418 acres; by this standard an acre of land measures 2 local *bighas*, 7 *kathas* and 16 dhurs. Small pieces of land were measured by a rod or rope one *katha* or 4½ cubits long (the square of which gives an area of one *ganda* or *dhur*), and the table adopted was 20 *gandas* = 1 *katha*, 20 *kathas* = 1 *bigha*. This *bigha* unit was restricted to the *nagad mahal* village and to those villages of the *kar mahal* in which cash rents had been partly introduced. The system is defective for the rope, which is made of *sabai*, can be stretched. There is moreover no fixed standard for the *katha* of 4½ cubits, for its length depends mainly on the length of the forearm (*hath*) (from the elbow to the end of the middle finger) of the person who actually measures the rod or rope.

"For the purposes of assessment the lands in the *nagad mahals* were divided into seven various classes according to the productive power of the soil and the crops grown, of which three were lands growing *aghani* crops, viz., *awal bahal*, *doem kanali* and *awal kanali*; and four were lands growing *bhadai* crops, viz., *doem kanali*, *awal bad*, *doem bad* and *soem bad*. These classes were those generally recognised by the people, and disputes about them were settled by a *panchayat* appointed by the *pradhan* and tenants.

During the settlement of the *pargana* in 1881, when it was under Court of Wards management, the marginal rates per local *bigha* were fixed with the sanction of the Board of Revenue. The *gora* or uplands were left unassessed in order to encourage the extension of cultivation. The Board of Revenue also sanctioned the following rates per *bigha* for the assessment of the *kar mahal* village, viz., *awal bahal*, 12 annas; *doem bahal*, 8 annas; *awal bad*, 6 annas; and *doem bad*, 4 annas. It was, however, found that to assess the *kar mahal* village at these rates would lead to too violent an enhancement, and finally their rental was amicably fixed at a rate of 25 per cent in excess of the amount previously paid without reference to measurement. The term of this last settlement expired in 1897, when the estate was under the management of the Encumbered Estates Department. Proposals for the resettlement of the *kar mahal* villages were then made, but the scheme had to be abandoned owing to the release of the estate in 1900. The old rates for the various classes of lands still prevail in the *nagad mahal* villages, but in a few cases they have been altered by speculative *mahajans* or other petty landlords. In some villages, too, where the rates have been left intact, the classification of land has been changed in order to obtain higher rates, and *gora* lands have been assessed at rates varying from 2 annas to 4 annas per *bigha*."

Class.		Rs.	a.
Awal bahal	..	1	0
Awal kanali	..	0	14
Doem bahal	..	0	12
Doem kanali	..	0	10
Awal bad	..	0	10
Doem bad	..	0	8
Soem bad	..	0	6
Badha	..	1	0
Bastu	..	1	0
Udbastu	..	0	12

LIVESTOCK.

Buffaloes oxen and cows are employed for agriculture, but the cattle are on the whole poor, the Hos taking no interest in improving the breed. Pasturage is generally ample, for there are wide stretches of jungle and hilly country, and there is usually enough rain at intervals throughout the year to keep the grass and other vegetation fairly green. In addition to the grass in the jungles and on the waste lands, cattle get pasturage in the rice fields, where few second crops are grown.

The comparative figures for livestock as enumerated in 1945 and 1951 census are given below (they do not include figures for the newly transferred police-stations of Chandil, Patamda and Ichagarh) :—

		1945	1951	*Variation.*
Bulls and bullocks	..	1,96,709	3,38,120	+1,41,411
Cows ..	..	1,45,291	2,31,436	+86,145
Young stock or calves	..	85,027	1,28,271	+43,244
He-buffaloes	..	41,352	54,874	+13,522
She-buffaloes	..	8,700	14,787	+6,087

		1945	1951	*Variation.*
Buffalo calves	..	4,741	5,841	+1,100
Sheep	..	76,173	1,67,241	+91,068
Goat	..	2,36,436	4,46,017	+2,09,581
Pigs	..	5,293	17,971	+12,678
Fowls	..	6,01,604	14,24,711	+8,23,107
Ducks	..	35,280	67,445	+32,165

From the statistics it is apparent that there had been all-round increase in livestock as a whole.

Cows and Buffaloes.

Bullocks and he-buffaloes are mainly domesticated for the heavier agricultural work on the farm, and cows and she-buffaloes are mainly kept for purpose of breeding and milk products. It is peculiar that the Hos, who constitute the majority of Adibasi population, are allergic to milk and its various preparations. Bullocks are the common animals in use in the agricultural operation and their high number indicates their relative importance in agricultural farm work and rural transportation. The he-buffaloes are also employed for agricultural operations. The local cattle are mostly seen in the rural areas and they are short in stature. The bullocks are costlier than the he-buffaloes and their average price varies from Rs. 100 to Rs. 200, whereas he-buffaloes cost Rs. 50 to Rs. 100. In the towns like Jamshedpur, Chaibasa and Chakradharpur the cows and she-buffaloes are kept mainly for milk production. According to livestock census taken in 1951 the quantity of cows' milk yield was 383.8 maunds whereas milk of the she-buffaloes was 197.2 maunds. This poor milk yield of the district is partly because of the fact that the Hos who form the majority of the population do not milch the cattle and partly owing to the poor breed of the cattle itself. The cattle also provide fertile farm-yard manure.

Sheep and Goats.

In addition to cattle, sheep and goats are kept on a large scale in the district. These animals are valuable assets as they produce wool, and skins and in the case of goats, also milk. Hides are exported from the district to other parts of the country. There is a good trade in meat within the district. Sheep are also sent out from this district.

Poultry.

Poultry is an important cottage industry in rural areas; especially among the aboriginals, and eggs, fowls and ducks are regarded as valuable kinds of food. In the year 1951 the total number of egg-laying poultry is estimated to be 75,314.

Veterinary Hospitals.

The common cattle diseases are rinderpest, haemorrhagic-septicaemia, black-quarter, foot and mouth diseases and anthrax. Inoculations and other possible measures are taken both for preventive and curative purposes. There are several veterinary dispensaries distributed in the district. The Chaibasa veterinary dispensary has been recently provincialised. The District Board maintains 4 veterinary dispensaries at Chakradharpur, Hatgamaria, Ghatsila and Baharagora. There is also one veterinary hospital in Seraikela. Besides, there are several veterinary doctors placed in different National Extension Service Blocks and Circle-*cum*-Development Blocks in the district.

Breeding.

The Animal Husbandry Department, in order to grade up the cattle, supplies stud bulls of Hariana and Tharparkar types to the *goshalas* at Chakulia, Tatanagar and Chaibasa. High pedigreed bulls are supplied through the Development Block Officers in their respective areas and directly in the areas which are not covered by the Blocks. There are facilities for castrating scrub bulls. There are also six artificial insemination centres in the district. A poultry farm has been opened at Chaibasa which is trying to improve the breed of the poultry in the district.

Irrigation.

There are mainly three departments for tackling irrigation problems in the district, namely, Irrigation Department, Revenue Department and Agriculture Department.

The rivers and streams of the district are hilly in character and are not much used for irrigation. They can only be used if their water is stored for future use. The other sources of water-supply are springs, tanks, wells, natural water reservoirs in depressions and *ahars*. The usual method of irrigation consists of the construction of embankments and *bunds* across the line of trench, i. e., at the upper end of a depression.

Since 1948 there has been a concerted minor irrigation drive as a part of the Grow-More-Food Campaign. The object of the drive was to repair the existing small irrigation works which had fallen into disrepair and to construct new schemes so as to provide irrigation to lands. The Deputy Commissioner assisted by other officers is responsible for implementing the scheme. The schemes are executed under the Private Irrigation Act, 1922. Under this Act works of repair or alteration to the existing irrigation works, costing up to Rs. 500 may be sanctioned by the Collector of the district and such schemes of repair or alteration which cost Rs. 2,500 or above but below Rs. 10,000 may be sanctioned

by the Divisional Commissioner. Schemes costing above Rs. 10,000 have to be sanctioned by the Government. Construction of new works, projects, etc., costing up to Rs. 5,000 are sanctioned by the Deputy Commissioner. Generally speaking the scope of the minor irrigation works has been confined to projects requiring earthwork costing up to Rs. 2,000 on an average. Under the provisions of Chapter IV of Bihar Private Irrigation Act, the Collector can make over the maintenance of minor irrigation schemes to a *Panchayat* or to a Co-operative Society.

According to *Bihar Statistical Hand-book*, 1953, 55 thousand acres of land was under irrigation in the year 1952-53. Since then up to 1956-57 about 430 schemes, consisting of minor, medium and surface percolation wells have been completed by the Agriculture Department and are irrigating nearly 14,065 acres of land. The Revenue Department, during the same period, has altogether completed 389 schemes which irrigate an area of 9,254 acres. Kaida and Brahmini Irrigation schemes were taken up during the First Five-Year Plan and were completed. The total estimated cost was Rs. 7.12 lakhs and the area irrigated 7,000 acres. Sonua Irrigation Scheme at an estimated cost of Rs. 6.19 lakhs is under execution. A sum of Rs. 2.19 lakhs will be spent during the year 1956-57 on this scheme. Sona Irrigation Scheme which is under investigation will also be taken up if found feasible and Rs. 4 lakhs will be spent over this scheme. Some small irrigation schemes if found attractive after investigation will also be taken up in this district.

Name of the Scheme.	Budgete estimate, 1956-57.	Area benefited in 1956-57 (in acres).
A.—*Spill-over scheme.*		
	Rs.	
1. Sona Irrigation Scheme	4,00,000	..
2. Sonua Irrigation Scheme ..	2,19,400	2,200
Total	6,19,400	2,200
B.—*New Scheme.*		
1. Torlow Irrigation Scheme	4,00,000	..
Grand Total ..	10,19,400	2,200

A. Spill-over scheme.

Sona Irrigation scheme.—The scheme comprises of the location of a masonry dam across Sona upstream of Kharsawan and taking off canals on either banks. The scheme is still under investigation.

Sonua Irrigation Scheme.—The scheme provides for a construction of a weir about 230 feet long across the river Sanjoy near the village Porahat about 3 miles north-west of railway station Sonua. A left side canal will take off from the weir and feed the existing Nagarkatta tank from which irrigation starts. The estimated cost of the scheme is Rs. 6.19 lakhs and will irrigate 2,200 acres on completion.

B. New Scheme.

Torlow Irrigation Scheme.—The scheme envisages the construction of a diversion weir at Bharbharya across the river Torlow in the district of Singhbhum in place of the existing breached earthen embankment and to revive the irrigation system. The weir will be *pucca*, 150 feet long and 10 feet high with head regulators and wing walls. The length of the main canal will be 10.5 miles and distributaries 23 miles. The scheme on completion will irrigate 7,000 acres of Manghara thana of Singhbhum district at an estimated cost of Rs. 20 lakhs.

MINOR IRRIGATION (Revenue).

The average expenditure was Rs. 2.30 lakhs. A sum of Rs. 1,11,716 has been allotted during 1956-57. The physical target is fixed at 55 units of work.

The irrigated area will cover mostly paddy fields and some *rabi* fields. There has been no water rate fixed for the water taken out from the big irrigation schemes by the Government. There is scope for a planned network of irrigation schemes in the district and this appears very necessary in view of the continued increase in the population of the district.

CHAPTER VI.

NATURAL CALAMITIES.

Liability to Famine.

The district of Singhbhum is subject to drought caused by deficiency in the local rainfall on which cultivators depend almost entirely for their crops. Even partial failure of rain affects agricultural conditions and if deficiency of rainfall is spread over a few successive years, there is bound to be an acute economic distress due to failure of crops. In times of distress, the Adibasis, who form majority of the population, fall back mainly on edible forest products which ordinarily form part of their daily food. Some of these forest produce are jack-fruits, tamarind, *mahua*, *sal* seeds and various roots. The Adibasis are in the habit of keeping in store a quantity of grains both for seeds as well as for consumption but the store is never such that could help them tide over the problem arising out of failure of the next crop.

Famine in 1866.

There was a widespread famine in 1866 throughout the district. The effects were, however, not so strongly felt in the Kolhan and the south-western part of the district as compared with the north-eastern part and specially pargana Dhalbhum. Droughts were also worse in Dhalbhum than elsewhere. The price of rice in Dhalbhum had risen to 16 seers or 12 seers per rupee far above the price in the rest of the district. Grain robberies soon occurred and the little stock of grain that existed was still more reduced by fires probably caused by incendiarism. Distress increased gradually till it culminated in July, 1866 in which month a terrible epidemic of cholera swept the district.

In the different parts of the district relief centres were opened some of which were managed by zamindars of Dhalbhum, Raja of Seraikela and Thakur of Kharsawan. Rev. Paul Struve, a Lutheran Missionary of Chaibasa started a relief centre in his mission. Cholera claimed the life of this kind-hearted missionary when he was accompanying the Civil Surgeon Mr. Hayes, in the north-east part of the district to check the epidemic. A portion of Barakar-Chaibasa feeder road was repaired to give employment to the famine-stricken people. A proposal then pending to build a new court house at Chaibasa was also carried out.

The highest price reached for ordinary rice during the famine was 5 seers per rupee in August, 1866. The aggregate of the daily number of labourers employed was 2,24,521, daily wages paid to them varied from 5 to 7 pice a day, according to the price of grain.

FAMINE IN 1874.

The next natural calamity came in 1874 when there was a famine although not so severe as that in 1866. The outturn of both *bhadai* crops and *aghani* rice was only 8 annas or half the average full crop. There was, however, some scarcity in the Kolhan and Saranda *Pir*, and also in Dhalbhum. The highest daily average at any time on relief works was 4,097 and the cost of the operations was Rs. 70,295, viz., Rs. 18,185 paid in cash as wages of labour and Rs. 52,110 representing the price of 386 tons of grain, of which 291 tons were given out gratuitously and 95 tons were advanced on loan. The relief works consisted mainly of the construction of reservoirs, those in the Kolhan being undertaken through the agency of *mankis*.

FAMINE IN 1897.

There was a partial failure of the crops in 1897. One relief work was started and money was advanced under the Agriculturists Loans Act and small amount of gratuitous relief was also given.

FAMINE IN 1900.

In 1900 there was famine in the neighbouring districts of Ranchi and Palamau and there was some scarcity in the west of Singhbhum district including the Kolhan Government estate and the Porahat estate. In the Kolhan the total outturn of food crop was only eight annas and in the Porahat estate about nine or ten annas of the normal. Famine was not actually declared but the situation was carefully watched and met by minor measures of relief. Important works undertaken out of the Kolhan Management Fund afforded employment to a large number of people. A number of irrigation *bandhs* were newly constructed or repaired and tanks were re-excavated. A free kitchen was kept open at Chaibasa during the months of July—October. Suspension of realisation of rents from *raiyats* in the Kolhan as well as in the different encumbered estates was ordered.

FAMINE IN 1915—17.

Towards the end of the year 1915 there was an acute distress prevailing in the district of Singhbhum and particularly in the Kolhan Government estate.

Deficient rainfall had caused bad harvest in large portion of the Kolhan during the years 1914—16. The deficit was calculated by Mr. Hallett, Deputy Commissioner at 14.87 inches for June—September for Chaibasa; 8.56 inches for Kotbari, 2.83 inches for Jagannathpur and 3.40 inches for Jaintgarh areas during the years 1914—16. The failure of monsoon had affected large tracts of *bad* lands in the Kolhan and second ploughing for removing weeds and grass

was ordinarily not done for want of rains. *Bera* lands were also very badly affected in most of the areas. The calamity was staved off for sometime owing to good crops in adjacent Native States.

The first detailed distress report was sent to Government by the Deputy Commissioner of Singhbhum on the 1st January, 1916. The reason was general failure of crops throughout the district. The price of rice shot up to about 5½ seers per rupee which was considered abnormally high at that time. The calamity was classed as widespread by the Deputy Commissioner in February, 1916 after a careful spot enquiry. According to the rules under Board's Tauzi Manual the Deputy Commissioner proposed suspension of 50 per cent of revenue in the case of villages where total outturn was approximately below 50 per cent and full collection was recommended to be made in all villages where outturn was above 50 per cent. The proposal was well supported by the results of the test works that had been started as early as January, 1916. The test works clearly indicated that the distress was very acute. An attempt was made from the beginning to see that the people were not driven to eat up their seed paddy. The proposal was accepted and famine was declared.

Relief works on a wide scale to meet the condition was started. Gratuitous relief centres were opened and a number of roads were taken up either for reconstruction or for new construction to give employment to the labourers. The distress had not been tided over even till the end of December, 1916 as Mr. M. G. Hallett, Deputy Commissioner of Singhbhum, gave detailed recommendations of suspension of different percentages of *kist* in the different *Pirs* in the middle of December, 1916. Famine works continued till August, 1917. Government had made liberal sanction of money to meet the acute distress at all stages.

The records show that an amount of Rs. 55,000 was sanctioned for gratuitous relief by Government at the first instance which was supplemented by a further grant of Rs. 2,00,000.

The managements of the different commercial concerns like Tatas, Cape Copper Company, Ltd., Rakha Mines, etc., took the initiative of purchasing rice from Calcutta and selling it at less than the cost price to the labourers. Their efforts had considerable effect in easing the situation so far as the heavy workers were concerned. It may be mentioned that the price of common rice within the district of Singhbhum had risen to even 5½ seers in the Ghatsila area during the peak period of the distress. The Kolhan Settlement Operations were kept in abeyance on account of the scarcity and a large number of tents of the Settlement Department were utilised for relief operations. Special grain shops had been opened in most parts of the Kolhan and free kitchen had been started. Even when rice was available in November, it was a difficult job to keep grain merchants under

control, some of whom made unduly large profits on free sales in the Kolhan area by stock-piling the produce.

The relief operations were done mainly through the *mankis*. Although the *mankis* were mostly uneducated and could not keep the accounts, they did their work in a very creditable manner. Gratuitous relief was more or less in their charge. Test works were under the control of the District Engineer. A large number of extra administrative officers had to be employed to meet the situation. From kitchen cooked food was given only once a day between 2 and 4 P. M. and ten chattaks were allowed to the adults, six chattaks to children over ten and children under ten were gi.en four chattaks of rations.

According to the *Final Settlement Report* by A. D. Tuckey, the *Pirs* in which distress was felt in 1915-16 were Ajodhiya, Asantalia, Sidiw, Chiru, Charai, Thai, Bharbharia, Lagra, the north of Bar *Pir*, Gumra, Berkela, Bantaria and Kotgarh and of these Charai, Thai, Bharbharia and Gumra *Pirs* suffered most. In 1916-17 these four *Pirs* with Ajodhiya and Sidiw were affected. From September, 1915 till December, 1915 Rs. 55,000 was sanctioned for famine relief. During the year 1916-17 the provision of Rs. 2,25,000 was made to meet the famine measures. The number of coolies that emigrated to Assam was 15,477 against 9,334 in the previous year. There was no immigration into the Kolhan.

It will be interesting to review the effects of the famine in August, 1917 when the relief operations were closed. The price of the cheapest rice at Chaibasa market averaged 9 seers to the rupee but at the outlying markets where the supply of imported rice was not so plentiful the price was about 8 seers to the rupee. Incidence of mortality was below normal. There was outbreak of cholera at the mines of Bengal Iron and Duia Steel Company in Saranda police-station which caused a number of deaths. Regarding crime, the favourable rainfall in the month of June caused a decrease in the incidence. For the same reason the number of emigrants from the district to Assam fell to 326 as against 1,660 in June, 1916. A number of labourers had also been sent to one of the Labour Corps for France from Kotbari and other villages in Thoi where crops had failed in 1916. The condition of cattle was good and there was sufficient fodder. Owing to good rainfall in May and June ploughing and sowing were done very early and the crops in August were promising. *Karhan* or second ploughing had been done and transplantation was also taken in hand. Agricultural loans were liberally distributed to help the labourers. Among the roads that were either newly constructed or repaired mention may be made of Kotgarh-Jagannathpur Road and Jagannathpur-Gamharia Road. Chaibasa *mela* ground was also made during this famine. A large number of *bunds* were made at a number of villages.

The majority of the big *bunds* of the Sadar subdivision, namely, the Katikora *bund* (near Kotgarh), the Jintugara *bund* (near Jagannathpur), the Tonto *bund* (2 miles west of Chaibasa), the Bidri *bund* and the Aita *bund* (4 miles off from Chaibasa on the Jamshedpur Road) were constructed at this time.

Owing to the failure of crops in 1918-19, the stock of food-grains available at the beginning of the year was very low and the people suffered considerably until the new harvest of 1919-20 was reaped. The *Land Revenue Administration Report* of the said year mentions that the Deputy Commissioner had found the people gathering *sal* seed and milling it into a thin flour and this was an indication that the Hos were hard hit. Rice rose to 3½ seers per rupee in some places during July and August. The mining and industrial companies arranged for the supply of rice to their employees at a loss and thus helped to keep down the prices. The Tata Iron and Steel Company sold rice at 7 seers per rupee throughout the period of distress at a net loss of 1½ lakhs. A good *mahua* season gave temporary relief. Test works were opened in the Kolhan and the Government sanctioned the taking up of the earthwork for the new Amda-Jamda Railway by the District Authorities under the supervision of the District Engineer. Some road works and *bunds* gave the necessary employment in other parts. Cloth sold by the Government was of great relief. These steps prevented conditions reaching the acute stage which appeared in the famine of 1915-16. Gratuitous relief was never called for except in isolated cases. Local subscriptions for gratuitous relief always exceeded the amount required. The emigration to the tea growing districts was high until the new crops were reaped. The general health of the people was, on the whole, good. The harvest, though fair, was insufficient to make good the damages to credit and stock by previous exhaustion.

Distress in 1935 and Onwards.

By the end of 1934 shortage of rain both in Sadar and Dhalbhum subdivisions had badly affected all the earlier ripening paddy and all crops on higher ground and the necessity of opening relief works in March, 1935 was felt. A large number of labourers migrated to Bengal and found work there. A few small test works were first started. Re-excavation of *bunds* and construction of new *bunds* and work on improvement of roads were taken up to relieve distress in the Kolhan area. Provision was also made for distribution of *taccavi* loans. The price of common rice had fallen to about ten seers to twelve seers as against 14 seers to 16 seers in 1932 and 13 seers to 16 seers in 1933. The area that was affected first comprised of about 55 villages in Baharagora thana.

By March, 1935 the situation had definitely deteriorated. In most of the affected areas a small cultivator was reported to

have got stock of rice for about six to eight weeks in his house as compared to the fact that at that time of the year a man of his type had stocks of six months or more. A good deal of migration of labour to the mines was also noticed. Cultivators worsened their lot by eating up their seed paddy.

The situation was sought to be met later by opening of widespread test works, construction and repairs of certain roads, distribution of Land Improvement Loans and gratuitous relief. General suspension of instalments of recovery of loans in Dhalbhum subdivision was also sanctioned.

Construction or repairs to Jagannathpur-Kumardhobi road, Chitreshwar road and Bombay road gave employment to thousands of persons. A number of tanks were taken up in Kolhan area for their re-excavation for the same purpose. By the end of April, 1935 the Deputy Commissioner reported that belts have had to be very much tightened up in certain areas and a large percentage of the people were having only one cooked meal a day and were living on jungle fruits and roots. By June, 1935 the Deputy Commissioner had reported that the people of Kolhan and Porahat areas were showing very great powers of resistance and in many cases they were having to eat *sal* and other seeds and there was also acute shortage of water. By the end of June there were scattered outbreaks of cholera and dysentery which made the situation worse. Fortunately, however, by the middle of June there was rainfall of about 2 inches to 5 inches and optimism returned to the cultivators who started their cultivation work. In July it was reported that there was considerable amount of privation among the poorer tenants who had consumed all their stocks, and were entirely dependent on casual labour. Distribution of *taccavi* loans had, however, succeeded in easing the situation. There was a good crop of jack-fruit, *jamun, neem* and other fruits and the villagers were eating and selling quite considerable quantities of them. The most disquieting feature was the high price of paddy and rice, the latter being still only 9 seers to the rupee in Chaibasa *hat* and not more than 11 seers to the rupee in any of the bigger mufassil *hats*. In Dhalbhum, however, the situation was better. The position improved gradually and the period of distress was over with the advent of proper rains and coming in of the new crops.

In 1940-41 there was a failure of the *Hathia* rains so essential for paddy crops and this caused a damage to the paddy and other crops. Loans had to be distributed in different areas to meet the situation. The distress was localised and not so acute.

There was a drought in 1942-43. This factor was coupled with the inflation in currency. There was an acute economic distress throughout the district along with the other districts in

Bihar. The price of common rice varied from 6 seers to 3 seers and of wheat from 4 seers to 2¼ seers to a rupee. In October, 1942 Jamshedpur was the dearest place in the province. In 1943-44 *bhadai* crop was somewhat damaged by the heavy rain in August and September. The price control measures taken to check the economic distress is dealt with in the chapter on 'Economic Condition'.

The next severe drought occurred in 1957 due to the failure of *Hathia* rains. The failure of Hathia rains led to the failure of approximately 60 per cent of maize, 50 per cent of *Bhadai* and 45 per cent of *Agahani* paddy. Famine condition was imminent and to save the standing crops 21,000 acres of paddy fields were irrigated with the help of pumping sets.

Cheap grains were supplied to the people through fair price shops, the number of which stood at 246 in 1957-58 and was raised to 289 by the end of May, 1958. To keep the supply steady in the rural areas 29 Government storage godowns were opened in the district. As rice could not be procured in sufficient quantity wheat was arranged for.

The intensity of the distress called for gratuitous relief and 8,299 persons were enlisted for this.

Hard Manual Relief Schemes were taken up. In 1957-58 a sum of Rs. 1,50,000 was allotted for the purpose out of which Rs. 1,46,000 was spent over the execution of 126 schemes. In 1958-59 Rs. 6,50,000 was allotted for the purpose and altogether 758 schemes have been taken up for execution. Luckily, the work of the doubling of the railway line from Raj Kharsawan to Bara Jamda could provide employment to about 7,000 labourers daily.

Taccavi loan was also distributed. In 1957-58 the amount under this head was Rs. 4,59,885. In 1958-59 a sum of Rs. 9,50,000 has been allotted as *Taccavi* loan for disbursement till the 26th June 1958.

FLOOD.

The rivers of Singhbhum district are fed by rain water and the duration of flood is generally a matter of hours only, during which the traffic across rivers remains more or less suspended. The rivers have been described in the chapter 'Physical Aspects'.

Floods are not a regular feature in this district like some other parts of Bihar. Among the periodical floods, the flood of 1920 deserves a particular mention. During the month of August, Manoharpur Bazar with two or three neighbouring villages were flooded. The whole of Manoharpur Bazar excepting the hospital

and the Mission Compound was under water. The running of the trains through Manoharpur Bazar was suspended for three days. About 20 villages along the lower Subarnarekha suffered most. The two rivers Koel and Koena which flooded on two sides of Manoharpur Bazar became almost one and caused the collapse of many houses and extensive damage to property and cattle. Relief in the shape of food or money was given. Serious breaches had occurred in roads, bridges and *bunds* for which special grants were given by the Government.

In 1927 there was a heavy flood in Baitarni causing heavy damages in Jaintgarh area. Many houses had collapsed and damage to property was done. The Jaintgarh inspection bungalow was partially submerged. The river changed its course and moved towards south. There was a thousand feet long bridge consisting of 30 span arches of 30 feet breadth on the river connecting Jaintgarh with Champua, a subdivision of Keonjhar, now a district of Orissa. This bridge had collapsed. The new iron and steel bridge was constructed to connect the link between the two provinces. During the flood, relief work was mainly done by the public spirited people of Chaibasa, at the instance of Sri Nalini Kumar Sen, a lawyer of Chaibasa.

In 1943 the district faced another flood and the rivers involved were Kharkai, Subarnarekha and Baitarni. The causeway on the Subarnarekha on Chaibasa-Jamshedpur Road was over-flooded. Fortunately the flood subsided within a very short time.

In 1953 there was another high flood in Subarnarekha and some damage to houses and crops was caused. A number of District Board roads had been damaged by the floods of 1953.

FIRE.

Sporadic cases of fire generally used to occur in forest areas. During the year 1899-1900 out of 4,07,584 acres of forest area 77,550 acres were burnt.

CHAPTER VII.

PUBLIC HEALTH.

CLIMATE.

A report on the climate of Singhbhum district occurs in Singhbhum Old Correspondence Volume. No. 20 (1869—1872)*. As there has hardly been any remarkable change a portion of the report is quoted below:—

> " The climate is a dry one owing to Singhbhum being well inland and between the months of February and June the weather is hot, sultry and the soil becomes exceedingly hard and parched............The thermometer during these months ranges from 82° to 97° in the shade and the average rainfall for the last four years during these months has been 0.68 inch and 1.95 inches respectively".

At another place the report mentions—"That the district of Singhbhum is unhealthy cannot be denied as where miles of low shrubby and in many parts thick almost impenetrable jungle of large timber trees exist the atmosphere becomes stagnant and ventilation impeded, yet the absence of low marshy swampy ground and the elevation of the surface of the district some hundreds feet above the level of the sea tend to neutralise partly the unhealthiness."

The physical contour of the district is an important basic factor for determining the public health. Details regarding the physical feature and climate will be found elsewhere. It may, however, be mentioned here that the type of climate within the district somewhat varies owing to the seemingly different physical conditions of the areas. Chaibasa proper and Dhalbhum areas are normally 500 to 700 feet above the sea level and enjoy a temperate climate. But Bandgaon and Saranda areas are on a plateau between 2,000 to 3,000 feet above the sea level with high range of hot and cold weather. The thick forests of these areas also determine the climate and the public health.

VITAL STATISTICS.

In the last District Gazetteer for Singhbhum (1910) O'Malley mentions—"Since 1892, when the present system of registering vital statistics was introduced, the death-rate has never exceeded the birth-rate, but on the contrary death-rate was 23.73 per mille, while the birth-rate was 41.88 per mille, and the average mean

*This volume along with other Old Correspondence volumes are maintained in Chaibasa Record Room. Excerpts and digests of more important letters are published seperately as Singhbhum Old Records. (P. C. R. C.)

ratio of deaths and births during the previous five years was 21.70 and 37.83 per mille respectively. The highest mortality recorded was in 1894, when the number of deaths was 27·04 per mille and the lowest was in 1893, when it was only 16.78 per mille. The corresponding figures for the birth-rate are 44.24 per mille in 1904 and 28.33 in 1895."

The statistics of births and deaths from 1941 to 1956 are given below. It, however, has to be mentioned that one cannot look for much of accuracy in these statistics because the registering agency for such statistics is still very defective.

Years.	Births registered.			Deaths registered.		
	Persons.	Males.	Females.	Persons.	Males.	Females.
1	2	3	4	5	6	7
1941 ..	20,375	10,393	9,982	12,820	6,991	5,829
1942 ..	18,908	9,780	9,128	12,230	6,749	5,481
1943 ..	14,380	7,316	7,064	11,597	6,598	4,999
1944 ..	15,494	8,001	7,493	10,655	5,903	4,752
1945 ..	17,233	8,767	8,466	9,484	5,381	4,103
1946 ..	15,315	7,990	7,325	8,852	5,045	3,807
1947 ..	15,347	8,036	7,311	9,833	5,550	4,283
1948 ..	15,757	7,933	7,824	8,047	4,615	3,432
1949 ..	16,909	8,649	8,260	7,756	4,304	3,452
1950 ..	18,729	9,503	9,226	12,050	6,684	5,366
1951 ..	16,195	8,214	7,981	9,478	5,200	4,278
1952 ..	19,736	8,957	8,779	7,594	4,317	3,277
1953 ..	16,301	8,449	7,852	7,096	4,044	3,052
1954 ..	16,008	8,297	7,711	17,374	8,881	8,493
1955 ..	17,374	8,881	8,493	6,293	3,737	2,556
1956 ..	16,006	8,198	7,808	5,357	3,034	2.333

From the statistics it may be seen that most of the observations of O'Malley still hold good. In 1954 death-rate had, however, exceeded birth-rate by 1,336 due to an unprecedented

infantile mortality and virulent type of fever. The birth-rate in 1954 was 10.80 per mille while the corresponding death-rate was 11.05 per mille. For other years the death-rate has remained much below the birth-rate. The average mean ratio of deaths and births during the last quinquennium was 5.90 and 11.53 per mille respectively.

The vital statistics for the newly incorporated police-stations of Chandil, Patamda and Ichagarh are, however, not included since they were not available. It cannot, however, be thought that their figures would have vitally affected the general trends.

The reporting agency in the rural areas is still the village Chaukidar who reports the vital statistics for the village under his beat on every parade day at the police thana. These village figures are compiled into thana figures by the officer-in-charge of the police-station and forwarded to the Civil Surgeon for onward transmission to the Director of Public Health, Bihar. The village Chaukidar with his very limited knowledge and multifarious duties has to indicate the cause of death as well. To him the bulk of the deaths should be due to fever and that is why not much accuracy could be expected from the reports given by the village Chaukidar.

MEDICAL AND HEALTH ORGANISATION.

The Civil Surgeon with his headquarters at Chaibasa is in overall charge of the State Medical and Public Health Organisation. He is incharge of the District Sadar Hospital where he is assisted by other qualified doctors. He is also incharge of the other Government hospitals and dispensaries distributed over the district. He has a supervisory function over the non-Government hospitals with Government subsidy like Ghatsila hospital, Jugsalai dispensary and the Chakradharpur dispensary. The District Board maintains 18 hospitals and dispensaries in different parts of the district and they are also under the supervision of the Civil Surgeon. The Civil Surgeon also supervises the working of the medical facilities in the industrial and mining areas. Most of the industrial concerns have their own well-equipped hospitals with doctors but the Civil Surgeon visits them and gives suggestions. There are some privately managed hospitals like Narayan Zenana Hospital at Chakradharpur or missionary hospital like one at Manoharpur and the Civil Surgeon's visit to them is not unwelcome. The Civil Surgeon is also incharge of drug control measures.

Although there is a separate District Health Officer for implementing the public health measures, the Civil Surgeon has his own responsibility in the matter. Whenever there is an epidemic or an extraordinary situation calling for emergent sanitation measure the Civil Surgeon keeps in touch with the Public Health Department and co-ordinates their work.

The Public Health Department has been maintaining a whole-time District Health Officer with headquarters at Chaibasa since 1941. The District Health Officer is also the *ex-officio* Health Officer of the Municipalities and Notified Areas of the district. He is helped by Assistant Health Officers, Health Inspectors, Vaccinators, etc.

The Tata Iron and Steel Company have got their separate Public Health Department since 1932. Jamshedpur Notified Area is one of the cleanest cities in India and can stand in comparison with the modern cities in the other countries.

There is a District Organisation under the State Branch of the Indian Medical Association in Singhbhum. The Civil Surgeon is the Chairman of this organisation. The number of qualified Allopathic practitioners within the district fluctuates. Besides the qualified Allopathic doctors there are a number of doctors qualified on other lines of treatment such as Homeopathic, Kabiraji, Unani, etc. There is no information of any association organised by these local practitioners.

Nutritional Survey-Diet.

The diet of the Adibasi population which forms the bulk of the people in the district is of low caloric value. In 1940-41 there was a Nutritional Survey in Singhbhum followed by another survey in 1949. In 1940-41 it was found that there was hardly any co-relation between income and consumption level. The summary of the Second Nutritional Survey was described as follows :—

"Comparison of the income and consumption levels in the different years of survey revealed:—

(*a*) the income of some families had gone up to a maximum of 600 per cent over the income recorded in 1940-41, but there was no appreciable difference between 1949 and 1950;

(*b*) consumption of food-stuffs had gone up in all the groups over that recorded in 1940-41;

(*c*) the diet of all the families in 1949 and 1950 was upto the standard suggested for Indians unlike 1940-41, except for fat and vitamin A. In 1940-41 only 80 per cent of the families were using oil as against 100 per cent in last year.

(*d*) there was a positive co-relation between income and consumption level; and

(*e*) consumption of various food-stuffs in 1950 was less than that in 1949.

More children had nutritional defects believed to be due to deficiency of one or more nutrients".

The diet of the different sections of the population has been described in detail in the Chapter "People". It will be sufficient to mention here that rice and a very small quantity of vegetable form the principal diet for the common man. Protein diet is almost unknown to the common man. In the urban areas the standard of living is higher and food of higher caloric value is consumed. Places like Jamshedpur, Chaibasa, Chakradharpur, Noamundi and Gua are fairly well-served by supply of green vegetables, milk and milk products, fish, egg, meat, poultry and fruit. The incidence of the consumption of country liquor is rather high in the urban areas which is, however, confined to the labouring classes. There is no dearth of cooking medium although pure *ghee* or oil is not easily available.

The figures collected in Diet and Nutrition Surveys in Singhbhum district have been compiled and have been put in the two tables below:—

TABLE I.

Intake of foodstuffs per consumption unit per day in ounces.

Cereals.	Pulses.	Leafy vegetables.	Other vegetables.	Fruits.	*Ghee* and vegetable oil.	Milk and milk products.	Meat, fish and egg.	Sugar and jaggery.	Condiments.
1	2	3	4	5	6	7	8	9	10
20.3	0.8	1.3	0.4	Negligible	.02	Negligible	0.1	..	0.03

TABLE II.

(Percentage of persons suffering from common deficiency diseases.

Vitamin A.	Vitamin B.	Vitamin C.	Vitamin D.	Goitre.
1	2	3	4	5
13.4	13.3	12.4	..	Sporadic.

SANITATION AND PUBLIC HEALTH ORGANISATION.

The sanitation and public health of the district is the responsibility of the local bodies and the State Medical Organisation. The District Board looks after the sanitation for the rural areas. For the urban areas the responsibility is with the Municipalities and Notified Area Committees. These local bodies have their own organisation for implementing public health measures. The Singhbhum District Board has its Public Health Department under a District Medical Officer with headquarters at Chaibasa.

The District Medical Officer works under the guidance and supervision of the Civil Surgeon. The Municipalities at Chaibasa and Chakradharpur, the Notified Area Committees at Jamshedpur, Jugsalai and Kharsawan have their own Public Health Organisation. The district health staff consists of three Subdivisional Assistant Health Officers, one for each of the subdivisions, 8 Sanitary Inspectors, 24 Health Inspectors and a large number of Vaccinators and Disinfectors besides the District Health Officer.

The Public Health Department has the responsibility of seeing to vaccination, re-vaccination, inoculation and disinfection. The chart below gives an indication of the work done by the Public Health Department from 1952 to 1956:—

Year.	Vaccination.		Inoculation.	Disinfection.		
	Primary vaccination.	Re-vaccination.		House.	Wells.	Tanks.
1	2	3	4	5	6	7
1952 ..	31,490	236,458	108,609	3,396	13,886	—
1953 ..	34,329	281,281	291,720	3,563	46,954	—
1954 ..	39,274	286,460	227,676	3,915	81,906	—
1955 ..	30,723	3,20,053	250,562	696	85,445	4
1956 ..	58,602	4,32,816	481,712	..	80,585	—

The Public Health Department since 1952 has taken up a Rural and Public Health Scheme according to which extensive propaganda work is done by magic lantern shows, models, etc., to teach the people the main principles of sanitation and good living. Luckily the physical contour of the villages with forests and open lands in abundance is such that the question of bad sanitation due to paucity of lavatories for the villages does not arise.

Sanitary measures at the industrial towns are also the responsibility of the particular industrial concern. The Health Department of the steel city of Jamshedpur is highly organised under a Director of Health Services who is also the Chief Town Administrator. Details will be found in a separate chapter on Jamshedpur.

WATER SUPPLY.

The main source of water supply are wells, springs and tanks in the rural areas. The State Government have launched a drive for extensive sinking of wells in the rural areas through various agencies. The industrial towns have got pipe water supply system. The district headquarters of Chaibasa is expected to have pipe water supply system very soon.

PRINCIPAL DISEASES.

In a letter written about nine decades back, which is preserved in Old Correspondence Volume No. 20 in Singhbhum Record Room, the following paragraph occurs:—

"Fevers are endemic and exist all the year round mitigated or increased according to atmospheric changes. In some years a sudden increase takes place in the cold weather immediately after the rains and sometimes in the hot dry season of the year. Epidemics of cholera and small-pox visit the district and increase the mortality but otherwise the rate of mortality is low. The dry climate of the district tends, I believe, towards the absence of chest diseases and affections which are of extremely rare occurrence and such a disease as phthisis is seldom seen. This dry climate is also very beneficial in chronic chest diseases as for instance that of chronic cough or bronchitis. The hot weather is too hot and enervating to be beneficial to weak states of health induced by nervous or those diseases caused by poverty of blood in which a cold bracing dry weather is necessary and unfortunately the cold weather is of too short a duration here to prove beneficial in those cases."

As has been mentioned before the faulty system of reports given by the chaukidar whose knowledge is extremely meagre swells up the mortality caused by fever. But, it is well known that the incidence of mortality due to fever is comparatively largest. The total number of deaths caused by it in the six years ending 1956 was 33,404. The prevailing fevers are malarial fever of the ordinary intermittent and remittent types usually followed by enlarged spleen and often prostration.

The principal diseases are cholera, small-pox and fever. The incidence of mortality due to these diseases in six years ending in 1956 is as follows:—

Year.		Cholera.	Small-pox.	Fever.
1951	..	15	1,420	6,815
1952	..	36	170	6,178
1953	..	69	82	5,722
1954	..	2	63	5,433
1955	..	21	7	5,150
1956	..	5	6	4,106

There are four Malaria Centres under the District Health Officer in the district. The Jamshedpur Notified Area annually spends about two lakhs of rupees on Anti-Malaria measures. The urbanisation of some of the malaria infested areas like Bandgaon, Manoharpur, Jamda, Gua and Noamundi owing to rapid industrial strides has led to the clearing of the jungles and the climate is definitely becoming better. The incidence of mortality has become low. Malaria fever is more prevalent and of more serious type, in parts of Manoharpur thana.

There was a Malaria Survey conducted by the Government of Bihar in 1942 from May to October in villages round Jamda, Bandgaon and Chaibasa. The area was thought to be highly malarious with a hot and humid climate and with moderate rainfall. The area is hilly with thick forest and populated mainly by Hos with a very low social, educational and economic standard. The principal crop is paddy and water supply is from shallow wells and springs.

It was found that there were numerous ditches, low land paddy fields and tanks, breeding all the species of anopheline mosquitoes. Malaria was found in hyper-endemic form in villages under Jamda Centre and in high endemic form in Bandgaon Centre. The majority of deaths were registered under fever and 70 per cent of them are attributable to malaria.

The Gram Sevaks or village workers under the Village Panchayats have now the responsibility of helping the Health Department in implementing anti-malaria measures.

Tuberculosis.

Tuberculosis is on the increase if the statistics in some of the hospitals are any index. But this higher incidence of tuberculosis is also more due to better diagnostic facilities, high index of living, the unfortunate physical and mental tension of the man in industry ancillary to the life of the industrial worker, and poor nutrition of the common man with a comparatively poor income. The incidence of mortality from tuberculosis cannot be calculated properly as there are no reliable statistics of the cases outside the hospitals. An increase is noticed in the urban areas. The incidence of the disease in the rural area cannot be estimated correctly as the rural people are still not hospital-minded. A well equipped hospital known as Ardeshir Dalal T. B. Hospital has been opened by the Tatas in a well situated spot about 5 miles away from Jamshedpur in March, 1953. It was opened by Dr. Sri Krishna Sinha, Chief Minister of Bihar on 27th March, 1953.

Small-pox.

The Bengal Vaccination Act (Act V) of 1880 has been extended to the whole of the district. Although vaccination is compulsory throughout the district and there are Vaccinators and Health

Inspectors it cannot be said that the people have taken to vaccination voluntarily although the previous reluctance is definitely on the wane. There was an epidemic of small-pox in 1951 which took a toll of 1,420 lives.

Cholera.

Sporadic cases of cholera are noticed every year during the rainy season from the rural areas. Inoculations are becoming popular. Cholera is not a problem in this district.

Other diseases.

Diarrhoea and dysentery are noticed in the rainy season. Typhoid fever is common. Black water fever is not uncommon and the attacks used to be fatal before. The incidence of leprosy is very heavy in the Dhalbhum subdivision. Respiratory diseases like influenza and bronchitis and skin diseases are common. Venereal diseases are definitely on the increase as borne out by the hospital records. In some of the hospitals the figures for such cases for 1950 have increased by 50 per cent over there as compared to those of 1942. The increase is due to the spread of the diseases in industrialised centres and reluctance to take standardised treatment at the beginning.

MEDICAL INSTITUTIONS.

There were only two charitable dispensaries in the district, one situated at Chaibasa and the other at Jagannathpur in 1907. The last District Gazetteer mentions that there was provision for 25 beds for males and 14 beds for female patients at Chaibasa dispensary and only two beds at Jagannathpur dispensary.

In 1957 there were 21 Government hospitals and dispensaries including the police hospitals at Jamshedpur and Chaibasa. They are distributed as follows:—

	State Hospitals and Dispensaries.	Number of beds.
1.	Sadar Hospital, Chaibasa	60
2.	Subdivisional Hospital, Jamshedpur	22
3.	Subdivisional Hospital, Seraikela	22
4.	Jagannathpur Hospital	4
5.	Manoharpur Hospital	4
6.	Kharsawan Hospital	5
7.	Adityapur Dispensary	1
8.	Jaintgarh Dispensary	1
9.	Hatgamaria Hospital	4
10.	Rajnagar Hospital	4
11.	Police Hospital, Jamshedpur	22
12.	Police Hospital, Chaibasa	10
13.	Ghatsila Hospital	9
14.	Chakradharpur Hospital	10
		178

15.	Gamharia Dispensary	Nil.
16.	Karaikella Dispensary	
17.	Anantpur Dispensary	
18.	Karaduba Dispensary	
19.	Singhbhum Mobile Dispensary, Katunga ..	
20.	Kolhan Mobile Dispensary, Kathbari	
21.	Jugsalai Dispensary	

The District Board maintains 18 Allopathic dispensaries, 5 Ayurvedic and 1 Homeopathic dispensaries in the district. They are distributed as follows:—

I. *Allopathic.*

(1) Majhgaon Dispensary in Kolhan, P. O. Majhgaon, 20 miles off from Kendposi S. E. Rly. Station.

(2) Tonto Dispensary in Kolhan, P. O. Chitimitti, 19 miles off from Chaibasa S. E. Rly. Station.

(3) Goilkera Dispensary in Porahat, P. O. Goilkera, 1 mile off from Goilkera Rly. Station (S. E. Rly.).

(4) Sonua Dispensary in Porahat, P. O. Sonua, 1 mile off from Sonua Rly. Station (S. E. Rly.).

(5) Bandgaon Dispensary in Porahat , P. O. Bandgaon, 33 miles from Chakradharpur S. E. Rly. Station.

(6) Manpur Dispensary in Dhalbhum, P. O. Manpur, 8 miles off from Haludpokhar S. E. Rly. Station.

(7) Chakulia Dispensary in Dhalbhum, P. O. Chakulia, 1 mile off from Chakulia S. E. Rly. Station.

(8) Baharagora Dispensary in Dhalbhum, P. O. Baharagora, 19 miles off from Chakulia S. E. Rly. Station.

(9) Dumaria Dispensary in Dhalbhum, P. O. Dhalbhum, 11 miles off from Ghatsila S. E. Rly. Station in Dhalbhum.

(10) Kokpara Dispensary, P. O. Kokpara, 6 miles off from Dhalbhum S. E. Rly. Station in Dhalbhum.

(11) Haludpokhar Dispensary in Dhalbhum, P. O. Haludpokhar, 1 mile off from Haludpokhar S. E. Rly. Station.

(12) Ramchandrapur Dispensary in Dhalbhum, P. O. Joypura, 14 miles off from Jhargram S. E. Rly. Station.

(13) Manusmuria Dispensary in Dhalbhum, P. O. Manusmuria, 10 miles off from Chakulia S. E. Rly. Station.

(14) Barajamda Dispensary in Kolhan, 2 miles off from Barajamda S. E. Rly. Station.

(15) Chandil Dispensary in Chandil P.-S. (Seraikela Subdivision), P. O. Chandil, 2 miles off from Chandil Rly. Station.

(16) Patamda Dispensary in Dhalbhum, P. O. Patamda, 20 miles from Balrampur S. E. Rly. Station.

(17) Chaulibasa Dispensary in Chandil P.-S. (Seraikela Sub-division), P. O. Chowka, 6 miles off from Chandil S. E. Rly. Station.

(18) Ichagarh Dispensary in Ichagarh P.-S. (Seraikela Sub-division), P. O. Patkum, 10 miles off from Chandil S. E. Rly. Station.

II. Ayurvedic.

(1) Kuldiha Dispensary in Dhalbhum, P. O. Rakhamines, 2 miles off from Rakhamines S. E. Rly. Station.

(2) Gandanata Dispensary in Dhalbhum, P. O. Manusmuria, 11 miles off from Chakulia S. E. Rly. Station.

(3) Toklo Dispensary in Porahat, P. O. Chakradharpur, 13 miles off from Chakradharpur S. E. Rly. Station.

(4) Nischintpur Dispensary in Porahat, P. O. Kera, 6 miles off from Chakradharpur S. E. Rly. Station.

(5) Purnea Dispensary in Kolhan, P. O. Purnea, 14 miles off from Chaibasa S. E. Rly. Station.

III. Homeopathic.

(1) Poravalki Dispensary in Dhalbhum Rly. Station, Haludpokhar.

The South Eastern Railway maintains a hospital at Chakradharpur and dispensaries at Tatanagar, Sini, Chandil, and Dangoposi. There is a Missionary Hospital at Manoharpur which is very popular. A Trust Committee maintains the Narayan Zenana Hospital at Chakradharpur.

The different industrial concerns maintains 11 hospitals situated at the respective industrial centres.

They are distributed as follows:—

(1) Main Hospital, Jamshedpur.

(2) Tinplate Company's Hospital, Jamshedpur.

(3) Wire Product Hospital, Jamshedpur.

(4) Telco Works Dispensary, Jamshedpur.

(5) Tatanagar Foundry Company's Hospital, Jamshedpur.

(6) Copper Corporation Hospital, Maubhandar.

(7) Copper Corporation Hospital, Musabani.

(8) Tata Company's Hospital, Noamundi.

(9) Steel Company's Hospital, Gua.

(10) Associated Cement Works Hospital, Jhinkpani.

(11) Tata Infectious Diseases Hospital, Jamshedpur.

Details of some of the more important hospitals of the district are given below.—

Tata's main hospital at Jamshedpur.—This hospital is maintained by the Tata Iron and Steel Company, Ltd., but the patients are not confined to only TISCO's employees. From a camp hospital during its initial stage with five beds, one doctor, one compounder and one nurse the institution has grown into one of the best organised and best run hospitals in India. There is provision for 420 beds distributed as follows:—

Cabins	17
Special Ward Beds..	23
Medical Beds	166
Surgical Beds	146
Maternity, Gynæcology and Septic Beds ..	68

The hospital is under the Director of Medical and Health Services who is helped by other specialist staff (13), Lady Medical Officers (4), Assistant Medical Officers (30) and Anæsthetist (1) and House Surgeons (8). There is a separate Dental Department. The hospital has well equipped Pathology and X-Ray Departments besides a T. B. Clinic.

There is an Emergency Department which remains open for 24 hours to attend to accident cases inside the works and the other serious cases requiring immediate hospitalisation. The hospital has a fleet of ambulances and cars.

Five Maternity and Child Welfare Clinics are also maintained by the Tatas.

Sadar Hospital at Chaibasa.—The Sadar Hospital at Chaibasa is one of the old medical institutions in the district maintained by the State Government. The total strength of beds during 1957 was 60 and the number of medical officers was 3 including the Civil Surgeon. The average daily attendance from 1951 to 1956 comes to near about 200.

Seraikela Subdivisional Hospital.—This Subdivisional Hospital is maintained by the State Government. The number of beds in this hospital in 1957 was 22 and the number of medical officers was 3. The daily average attendance in 1951 was 80.3 which shot up to 223.8 in 1955. There was again a decline to 128.6 persons in 1956.

Jamshedpur Subdivisional Hospital.—The hospital is maintained by the State Government and has a provision for 22 beds. There are two doctors to look after the patients. The daily average attendance of patients in 1951 was 215.3 which rose to 255.2

in 1953. In 1956 the average daily attendance was 205.1 persons.

Tata Company's Hospital at Noamundi.—This hospital has got 11 beds, 8 for males and 3 for females. A new maternity ward has been opened with 12 beds. The daily average of patients' attendance (outdoor) is 250 males and 150 females.

The distribution of indoor beds in the district is as follows:—

Sadar Subdivision	145
Dalbhum Subdivision	613
Seraikela Subdivision	27
Total	785

Taking into consideration the population of the district the number of 785 beds is far from satisfactory and the ratio comes to one bed for 1,886 souls.

Leprosy Relief.

The Jamshedpur Rotary Club maintains three clinics in Jamshedpur City for the lepers. They are located at Burma Mines, Sonari and Ramdas Bhatta. The patients are given treatment by the latest sulphone method. The cases that require hospitalisation are sent to the Leper Home at Purulia (now in West Bengal). The annual expenditure comes to near about Rs. 10,000 which is met by donation from the industrial concerns and contributions of the philanthropic minded citizens.

Indigenous System of Treatment.

The common man in the district still believes that the diseases are caused by the anger of spirits. They still go to the witch doctor who prescribes sacrifices of a chicken or a goat. The *bongas* or the spirits have to be propitiated and the witch doctor known as *deonia* or *ojha* has a good practice. Their treatment consists of incantation, occasionally giving a beating to the patients or prescribing sacrifices.

Apart from the witch doctors the common man in this district has still a great belief in the indigenous system of medicine which consists in the use of various herbs, parts of plants like root, bark or leaf. The forests of the district abound in them. Some of these herbs are used by the *Vaidyas* who practise Ayurvedic system of treatment. But some of these herbs are not often used by the *Vaidyas* and are possibly not included in the acknowledged pharmacopoeia. But it may be mentioned that the use of these indigenous herbs has usually got to be simultaneous with the incantation prescribed by the *ojhas*. Some of

the herbs used for particular diseases in the indigenous system are mentioned below:—

Disease.	The name of the plant or herbs in Ho language.	Method of treatment.
I. Headache ..	(1) *Husidaru* ..	Fruit to be hung in ear.
	(2) *Bochotupi* ..	Fruit to be used for smell.
	(3) *Meersuku* ..	Root to be applied over forehead.
	(4) *Bakrapata* ..	Leaf with mustard seed to be applied over forehead.
	(5) *Lemon* ..	Juice with bark to be rubbed over head.
II. Stomach-ache	(1) *Sarom Challom* ..	Plant with leaf to be drunk.
	(2) *Head-Pitu-red* ..	The root to be ground with water to be taken.
	(3) *Ote-Armu* ..	To be taken with water.
	(4) *AraBa-Red* ..	Powder to be taken with water.
	(5) *Gra Dola* ..	To be taken with water.
	(6) *Bir-Suku-Red* ..	To be taken with water.
III. Dysentery ..	(1) *Edel-Sanga* ..	Bark to be used with water as drink.
	(2) *Kuda* ..	Bark to be taken with water.
	(3) *Mango* ..	Bark to be taken.
	(4) *Bel* ..	To be taken with water.
	(5) *Janum-Jang* ..	To be taken with water.
IV Blood Dysentery	(1) *Murud Sanga.* ..	
V. Malaria ..	(1) *Saprum Pata* ..	To be boiled with water and taken as drink.
	(2) *Ote-Merel* ..	Boiled with water to be taken.
	(3) *Renge-Benam* ..	
	(4) *Bana Naki* ..	Leaf or bark juice to be taken.
	(5) *Beerbut* ..	Leaves to be taken as tea drink.
	(6) *Buru-Benga* ..	
	(7) *Bir-Malchi* ..	
VI. Chest Pain ..	(1) *Chatni* ..	Bark of the tree to be applied.
	(2) *Doadaru* ..	Bark to be applied.
	(3) *Rohini* ..	Bark to be applied.
	(4) *Ote-Hatna* ..	Root to be applied and partly taken as mixture.
VII. Ulcer ..	(1) *Khair* ..	Bark to be boiled in water for cleansing and antiseptic treatment.
	(2) *Diri-Dumbu* ..	Grass to be powdered and applied.
	(3) *Charpatu Red* ..	To be powdered and applied.

Disease.	The name of the plant or herbs in Ho language.	Method of treatment.
VIII. Bone fracture	(1) *Bir boot* ..	Root to be powdered and drunk with water.
	(2) *Rubrobpata* ..	To be applied externally.
	(3) *Lupu Aa* ..	Root to be taken (powdered).
	(4) *Konja Red* ..	Plant to be powdered and applied.
IX. Cough and Cold	(1) *Rotkoye-Janum* ..	To be fried with *ghee* and taken.
	(2) *Munga* ..	Leaves to be boiled and taken.
	(3) *Kaid* ..	Roots and leaves to be taken as tea.
	(4) *Rola-Merel* ..	
	(5) *Lupung* ..	Powder to be taken with sugar-candy.
X. Female Disease	*Salukad Ba* ..	To be used with water.
XI. Swelling ..	*Pojo* ..	Bark to be applied externally.
XII. Purgative ..	(1) *Boka-Aa-Red* ..	With hot water.
	(2) *Milk of Etke* ..	To be taken with egg.
	(3) *Rola* ..	Powder to be taken with molasses.
XIII. Typhoid ..	*Toto*, *Palas* and *Kandil*	To be boiled in mustard oil for appliance.
XIV. Small-pox ..	(1) *Edel-jung* ..	Seed to be taken as preventive measure.
	(2) *Sitikkan-Red* ..	To be drunk with water.
	(3) *Rotkod Janum Red* ..	Root to be taken with black pepper.
XV. Cholera ..	(1) *Icha Ba* ..	To be taken with water.
	(2) *Tarob jang* ..	Powder to be taken with water.
	(3) *Atkir red* ..	Root to be taken with hot water.
	(4) *Mur jang* ..	To be taken with hot water.

CHAPTER VIII.

EDUCATION.

General Description.

There is hardly any record to show the picture of education in the district of Singhbhum before the advent of the British. The district was brought under the British administration in 1837, because of constant troubles among the aboriginals (*Larka Kols*) and the Rajas of Mayurbhanj, Keonjhar, etc. It can be well guessed that before 1838 there was hardly much of what one understands by education. The Adibasis have no written language of their own. They had little interest besides a mere existence and the Rajas were not interested in imparting education to them.

The famous minute of Wilkinson of 1838 is a document replete with information of the area. Among other directives there was one about starting of schools for the education of the Adibasis. The tremendous odds that had to be confronted in introducing education of any type in this district could well be imagined. The other districts of Bihar were already very much advanced when the British stepped in and had highly developed languages, literature, arts, etc. The vernaculars in the other districts were extremely rich while there was a fair incidence of Sanskrit and Persian learnings as well. But in Singhbhum that background wa' totally absent. There was no written language of the Adibasis and hardly any literature in their spoken language in the modern sense.

The economic and the social structure of the people entirely depended on the *mankis* and *mundas*. Every village had its *munda* who was the head of the village for all practical purposes. There was a *manki* over several villages who was not only the law-maker but also the law-giver. He was the link between the administrator and the administered both in the pre-British days and immediately after. If the villager wanted any loan he had to go to the *manki* or *munda*. The *manki* and the *munda* realised the tax or the rent from the villagers on behalf of the Raja and then turned over to the British administrator.

Now the *mankis* and the *mundas* have had a tremendous aristocracy and exclusiveness about them. They did not like the Christian Missionaries or the early English teachers because they thought that their activities will go against their interests and alienate the one hundred and one *bongas* (spirits) that rule them. This is the reason why there is not much of Christian Missionary activities in Singhbhum district in comparison to their activities in other districts. Had the Missionaries been offered the

latitude to evangelise and to spread education as they have had in the other districts of Chotanagpur, there might have been today a much higher incidence of literacy and education in Singhbhum district.* This district also suffered a lot for the non-availability of suitable personnel for staff in the schools. There has not been much of the missionary spirit or zeal on the part of the teachers who had to be imported from other districts. It may be mentioned that some of the early recruits as teachers were from Shahabad district. The apathy to work as a teacher in Singhbhum is still there to some extent.

Even in 1838 in his famous despatch Wilkinson mentioned that there must be spread of education to put down witchcraft and the institution of *sokhas* who make divinations and indicted someone as the witch that led to his murder. But *sokhaism* and witchcraft have not yet been stamped out. There are still dozens of murders every year due to the belief in witchcraft. But nevertheless, there has been a good deal of disintegration of Adibasi culture owing to the impact of English education. This aspect has been separately dealt with in the chapter on the Adibasis.

PROGRESS OF EDUCATION.

The first Anglo-Hindi school was started at Chaibasa in 1841 particularly for the Hos who were loosely described as Kols. It was a difficult job to get any teacher and with great difficulty the services of two teachers from Shahabad district were obtained. At first each boy was given one pice a day for attending the school and this amount was later increased to half an anna and then to two annas a day. The old correspondence preserved in the Commissioner's office in Ranchi mentions about the great enthusiasm with which the Kol boys and their parents responded to this Anglo-Hindi school. It is mentioned that the boys built their leaf-huts in the compound of the school so that they could be living nearby.

In 1848 this school was attended by 92 boys, of whom 49 were Hos. From the Old English Correspondence Volumes maintained in Singhbhum Record Room, it, however, appears that the school had to be closed down in 1851. In its place an experiment was made in starting schools at Ghatsila, Dhalbhum, Chaibasa, Charri, Jaintgarh, Kolhan and at the headquarters of the then Seraikela State. In these schools the subjects were taught through Bengali medium. The Bengali schools were not popular and in 1853 the Principal Assistant reported that he considered the Bengali schools practically useless as the Hos would not attend the schools.

The present Zila School at Chaibasa was started in 1865. By 1871-72 there were six schools in the district. Besides the Zila School at Chaibasa and one aided middle school at Ghatsila

* There are instances where conversion of a *manki* or a *munda* has helped the conversion of others in the village.

there were four middle vernacular schools at different places of the district. These six schools had 418 pupils. There were also 28 primary schools with 604 pupils, besides 48 village *pathsalas* with 455 children. The Christian Missionaries had already started before 1871-72 three Mission schools attended by 123 children. Two of them belonged to the Society for the Propagation of the Gospel Mission and one to the German Lutheran Mission.

The following year with the introduction of Sir George Campbell's scheme of vernacular education, the number of schools rose from 34 to 63 and that of pupils from 1,822 to 3,144. While in Dhalbhum this scheme was successful in the Kolhan it had to pass through many difficulties. The Hos were suspicious that those schools were agencies for the conversion of the people to Christianity or were traps for catching young man for transportation to the tea plantations in Assam and Cachar. The *mankis* and *mundas* did not look upon these schools with favour. Popular omens also appeared in some villages to be a difficulty. O'Malley mentions the particular case of a village where the children *en masse* deserted a school because on the day of its opening as the boys preceded by their elders were coming to join it, a kite had pounced upon a brood of chickens and carried off one of them. It was regarded as bringing a calamity to the village and the elders attributed it to the opening of the school. The Deputy Commissioner had to intervene to bring the situation back to normalcy.

The progress of education in the district from 1890 onwards is explained by the statistics given below:—

Class of schools.	1890		1910		1930		1950		1957	
	Number of schools.	Number of scholars.	Number of schools.	Number of scholars.	Number of schools.	Number of scholars.	Number of schools.	Number of scholars.	Number of schools.	Number of scholars.
1	2	3	4	5	6	7	8	9	10	11
High schools ..	1	93	1	305	4	1,207	15	8,678	53	15,129
Middle schools ..	7	538	16	1,278	32	4,371	65	17,999	118	23,912
Primary schools ..	281	13,107	..	..	308	14,250	734	48,584	1,012	70,496
Basic schools ..	..	..	..	..	..	..	28	2,694	28	3,928
Training schools (including technical and professional).	..	..	3	60	3	60	7	308	12	797
Special schools ..	1	12	1	15	2	20	3	53	6	442
Total	290	13,750	21	1,658	340	19,908	852	78,316	1,229	1,14,704

This table shows the progress in education during the last 67 years. As against one school to eleven villages in 1890 the year 1957 showed the proportion working at one school to four villages.

The number of schools has increased by 150 per cent in 1957 and there is now one school for every three villages. Again while in 1890 only 32 per cent of school-going children were reported to be under instruction, in 1950 it was 45.6 per cent and in 1957 it was over 60 per cent. There was a considerable progress both in the number of institutions and scholars between 1950 and 1957.

Further light on the educational progress of the district is thrown by the census reports of the last 50 years. The census of 1901 returned 15,263 as literate. They represented only 2.5 per cent (males 4.8 per cent and females 0.3 per cent) of the population. There was a considerable increase in the incidence of literacy in the next twenty years. In the subsequent census returns of 1921, 1931 and 1941 the literacy figures were 33,617, 46,836 and 151,786 respectively. The big rise in 1941 is due partly to the mass literacy movement started by the Government in 1937. In 1951 some progress was again noticeable and the returns of literacy showed 1,90,449 males and 52,348 females out of the respective male and female populations of the district.

The description above does not include the areas of Chandil, Patamda and Ichagarh police-stations which integrated in Singhbhum district in 1956. The progress of education in these newly integrated areas is shown by the statistics below:—

Kinds of schools.	1890		1910		1930		1950		1957	
	Number of schools.	Number of pupils.	Number of schools.	Number of pupils.	Number of schools.	Number of pupils.	Number of schools.	Number of pupils.	Number of schools.	Number of pupils.
1	2	3	4	5	6	7	8	9	10	11
High schools ..	..	..	..	..	..	..	1	31	3	228
Middle schools ..	..	..	..	..	1	80	4	583	14	1,519
Primary schools	14	282	22	539	44	1,050	134	3,730	209	9,690
Total ..	14	282	22	539	45	1,130	139	4,344	226	11,437

The statistics above show that there has been good progress only in the last 27 years. Between 1930 and 1950 the number of schools and pupils had increased by about 300 per cent and a steady rate of progress has been maintained since then.

COLLEGIATE EDUCATION.

There are now three colleges in the district.

The Jamshedpur Co-operative College arose from a small tutorial college sponsored by a few individuals in 1949. It was started as a night college owing to the absence of a separate building and still continues in a high school building. At the beginning, the college had only 13 girl students on its rolls but the usually accepted unlucky number 13 has brought in great luck to the college. It soon changed into a co-educational institution. The college is now affiliated to Bihar University up to B. A. standard. The strength of the students during the session 1956-57 was 1,050 of whom 120 were girls. The Tata Iron and Steel Company had donated 30 acres of land near the Subarnarekha river and Bagakudar lake for the construction of its building and the construction work is in progress. There are no science classes yet. The college is expanding very rapidly.

The Jamshedpur Women's college was started in 1949 with 7 students on the roll. This college is not yet affiliated to the Bihar University but the girl students appear at the University examination as private candidates. The institution teaches up to B. A. standard. The strength of students during the session 1956-57 was 265.

The Tata College at Chaibasa town was started during the session 1953-54 in Chaibasa Zila School. It is now a Degree College and has its own building. The Tatas have donated 7 lakhs of rupees till now for this college. It stands affiliated to the Bihar University. The total strength of students during the session 1955-56 was 233 of which 16 were girls as against 500 in 1956-57. Out of the total number of 500 students of the college, 216 belong to the Backward Community, majority being Adibasis of Singhbhum. The college hostel has accommodation for 31 boarders.

SECONDARY EDUCATION.

Secondary education is imparted by high schools and middle schools. Regarding secondary education O'Malley in the last District Gazetteer mentions that there were altogether 14 schools at work, and the number of pupils on the roll in 1908 was 1,331. There was, however, only one high school, viz., the Zila School at Chaibasa. In 1908 this Zila School had 230 students on the roll.

In 1950 there were 15 high schools but after that there has been a remarkable increase both in the number of high schools and pupils. The statistics below show the progress of high

schools in the district during the quinquennium of 1952-53 to 1956-57:—

Year.			Number of schools.	Number of pupils.
1952-53	..	..	39	10,528
1953-54	..	..	44	11,534
1954-55	..	..	46	12,226
1955-56	..	..	48	13,570
1956-57	..	..	56	15,357 (including Chandil, Patamda, and Ichagarh police stations transferred to Singhbhum district in 1956).

There had been an increase of about 150 per cent both in the number of institutions and scholars.

Middle Schools.

There were 13 middle schools consisting of 7 middle English schools and 6 middle vernacular schools in 1908. But with the abolition of English from the curriculum of middle schools throughout the State in 1948 now all schools are called middle schools. The statistics below give the correct perspective of the progress of middle schools and pupils in the district from 1952-53 to 1956-57:—

Year.			Number of schools.	Number of pupils.
1952-53	..	..	67	15,545
1953-54	..	..	86	17,433
1954-55	..	..	107	19,867
1955-56	..	..	111	20,422
1956-57	..	..	132	25,431

There had been phenomenal progress in the number of schools in the first three years. This pace of progress could not be maintained in the succeeding two years. In 1956-57 the increase in the number of schools was due to the 14 middle schools of Chandil,

Patamda and Ichagarh police-stations that came over to Singhbhum district . The number of schools has increased by about 100 per cent in course of five years, but the number of pupils has increased by only 75 per cent.

PRIMARY EDUCATION.

The last District Gazetteer (1910) mentions that : "There are, according to the returns for that year, 42 upper primary schools for boys attended by 2,409 pupils and 330 lower primary schools with 9,808 pupils. The number of the latter is apt to fluctuate according to the character of the agricultural season, for in time of dearth the children are sent out to add to their parents' income by labour." The recent progress of primary education is shown by the statistics below:—

Year.	Number of schools.	Number of pupils.
1952-53	732	49,482
1953-54	814	52,763
1954-55	966	62,428
1955-56	991	66,004
1956-57	1,221	80,186

In 1953-54 the number of schools had increased by 82 and in the second year by 152. In the third year the progress was slow as the number had increased by only 25 schools. The big rise in the number in 1956-57 is due to the 209 primary schools of Chandil, Patamda and Ichagarh police-stations that came over to this district. The number of schools and pupils have increased about 70 per cent in the course of five years.

COMPULSORY PRIMARY EDUCATION.

Chaibasa is the only Municipality in the district, where compulsory primary education has been introduced since 1941. There are 11 schools in the area of the Municipality with 1,013 students in 1956-57 . One Attendance Officer is in charge of the work and the total expenditure incurred by the Municipality was Rs. 7,900 during 1956-57.

BASIC EDUCATION.

Basic education has been introduced since 1950. There were 11 senior basic schools attended by 1,514 pupils and 17 junior basic schools with 1,180 pupils. The progress of basic schools

consisting of senior basic schools and junior basic schools of the recent years is given in the statistics below:—

Kinds of schools	1952-53		1953-54		1954-55		1955-56		1956-57	
	Number of schools.	Number of pupils.	Number of schools.	Number of pupils.	Number of schools.	Number of pupils.	Number of schools.	Number of pupils.	Number of schools.	Number of pupils.
1	2	3	4	5	6	7	8	9	10	11
Senior basic schools	12	1,296	19	2,031	20	2,265	23	2,643	24	2,698
Junior basic schools	16	1,140	11	637	15	810	16	905	4	230
Total ..	28	2,436	30	2,668	35	3,075	39	3,548	28	3,928

There had been steady improvement both in the number of schools and pupils in the senior basic schools but so far junior basic schools are concerned the statistics of both schools and pupils are fluctuating. Both the number of institutions and scholars of the senior basic schools had increased by 100 per cent in the course of five years. But the number of schools and students of the junior basic schools has fallen. The number of scholars had shown a remarkable increase of about 60 per cent since 1952-53.

GIRLS' SCHOOLS.

O'Malley mentions in the last Gazetteer that the total number of girls attending schools of all kinds was 873 in 1908. Further he mentions that "Female education has on the whole made little progress in the district except Dhalbhum, where two high class Hindu ladies have taken to the profession of teaching, which is a hopeful sign, the employment of female as teachers in girls' school being the first requisite for success". The speculation of O' Malley has become true which is apparent from the statistics of girls' institutions and pupils given below:—

Kind of schools.	1950		1957	
	Number of institutions.	Number of pupils.	Number of institutions.	Number of pupils.
High schools ..	2	912	6	1,855
Middle schools	10	2,831	11	3,132
Primary schools	28	1,981	27	2,224
Total ..	40	5,724	44	7,211

There had been steady growth in the number of girls' schools and pupils. All these institutions are invariably staffed by the women.

Special Schools.

Special schools include Sanskrit *tols*, *maktabs* and other professional schools. There is an Agriculture School at Chaibasa which gives training in Agriculture and there were 48 students on roll in 1957. The old training schools for *gurus* are now run on expanded basis and 5 senior training schools with 466 pupils and 5 junior training schools with 127 pupils are functioning in the district in 1957. The Technical School at Chaibasa imparts training in carpentry, weaving, stone-carving and 48 students were on roll in 1957. There were other 6 special schools of Sanskrit *tol* and *maktab* types. Altogether there were 18 special schools with 1,239 students in 1957.

To facilitate the education of the aboriginals and backward communities the State Government have granted various scholarships. Besides competitive scholarships Government awarded a large number of welfare scholarships to children of aboriginals and backward communities.

The medium of instruction in schools throughout the district is Hindi. In the Dhalbhum subdivision there are some schools which teach through the regional languages at the primary stage and Hindi thereafter.

Inspecting Agency.

Regarding inspecting agency O'Malley in the last District Gazetteer states that "The local inspecting agency consisted in 1908 of a Deputy Inspector of Schools stationed at Chaibasa, 4 Sub-Inspectors in charge of the Sadar, Kolhan, Porahat and Dhalbhum circles, and 8 Inspecting Pandits". There had been a tremendous growth in the number of inspecting agency of the district since. There was a District Education Council sponsored by the Government that controlled subsidised high schools, elementary schools for the Hindi-speaking people in the backward areas, centres for training teachers in Hindi schools for aboriginals and Harijans and social night centres in the backward areas. But this Education Council has been abolished recently. At present there are several controlling agencies in the district. Besides, Government and District Board schools, the District Inspector of Schools stationed at Chaibasa has to supervise all kinds of schools, whether they are maintained by Tata Iron and Steel Company or other concerns, Missionaries, Municipalities or others. There is also one District Inspectress of Schools for Singhbhum and Dhanbad districts, who controls the girls' schools of the districts. Besides, there are three Deputy Inspectors of Schools, one for each subdivision and 24 Sub-Inspectors of Schools in the district.

The District Superintendent of Education whose headquarters is at Chaibasa is in charge of primary and special schools of the district. Under District Superintendent of Education there are two Deputy Superintendents of Education, one stationed at Chaibasa and the other at Seraikela. Two Deputy Superintendents for Basic Schools have been appointed for the supervision of basic schools. There is also an Additional Superintendent of Education for Singhbhum and Dhanbad who supervises the schools of the backward areas. The total strength of inspecting agency has been 36 in 1957.

The District Board, which grants stipends, controls middle and primary schools in the rural areas of the district. The Municipalities of Chaibasa and Chakradharpur and the Jugsalai Notified Area Committee control schools in their respective jurisdiction. The school committee of Jamshedpur which gives grants in respect of schools in the town of Jamshedpur and neighbouring villages owned by Tata Iron and Steel Company controls such schools. The District Adimjati Sevamandal manages a few primary schools in the Kolhan and Porahat areas for the benefit of aboriginals. There are other private agencies such as the Society for the propagation of Gospel and German Lutheran Mission and local private committees that run their own schools of various standards.

HOSTELS.

Government maintain two big hostels for the aboriginals in the district, one at Chaibasa, known as Krishna Ballav Hostel, founded in 1949 and the other at Seraikela, known as Narayanji Hostel, founded in 1952. Both these hostels accommodate 100 boarders. This Chaibasa Hostel has formally been made over to the Adimjati Sevamandal for management.

Besides these two hostels, Government have been maintaining one more hostel through the Welfare Department at Majhgaon. There are hostels attached to Chaibasa Zila School, Russel High School and the two State-managed high schools of Seraikela and Kharsawan. Generally each high school manages a hostel also.

LIBRARY.

There are 4 libraries at Chaibasa. They are :—Rammoham Roy Library, Ganesh Library, Urdu Library and State Library. The Rammohan Roy Library was established in 1929 and is housed in Rabindra Bhawan at the premises of Brahmo Samaj which is a century old church here. The State Library has been established in 1957. There are at present 66 libraries in the district, out of which 53 are receiving State grant.

CHAPTER IX.

LOCAL SELF-GOVERNMENT.

DISTRICT BOARD.

History.

The provisions of the Bengal Local Self-Government Act III (B.C.) of 1885 had not been extended to the district of Singhbhum when the last District Gazetteer was published in 1910. This Act was extended to the district with its two subdivisions, Sadar and Dhalbhum, on the 1st April, 1920. The Act has not yet been extended to the subdivision of Seraikela which was formed on the merger of Seraikela and Kharsawan to the district on the 1st May, 1948.

Prior to the extension of the Act there was a Road Cess Committee which used to look after some of the functions which a District Board normally discharges. The chief functions of the District Board are to construct and maintain roads, maintain medical institutions, pounds and generally look after public health and sanitation in the rural areas. Earlier it was also the responsibility of the Board to set up and maintain educational institutions up to the middle standard. The Board has now been divested of this function.

The District Board is an elective body and most of the members including the executives consisting of the Chairman and the Vice-Chairman are elected. A few members are nominated by the Government.

In the last District Gazetteer of Singhbhum (1910) the Road Cess Committee has been described as below :—

"The provisions of the Bengal Local Self-Government Act III (B.C.) of 1885 were extended to all the other districts of the Chotanagpur Division in 1900, but Singhbhum was excluded from its operation, because the Cess Act is in force in only a part of the district and because the people are less advanced than in the other districts of the Division. The administration of roads is controlled by the District Road Committee which was established in 1873. It consists of 15 members, of whom five are officials and ten are non-officials. Its average annual income during the decade 1892—1901 was Rs. 18,000, of which a Government grant accounted for Rs. 10,000, while Rs. 5,000 were derived from a cess on lands and Rs. 1,600 from a cess on mines. In 1907-08 there was an opeining balance of Rs. 17,590 and the receipts amounted to Rs. 42,995, while the expenditure was Rs. 33,487.

"The principal items in the receipts are a grant of Rs. 10,000 made annually by Government for the upkeep of roads, the cess on lands, and the cess on mines and railways. The cess is levied at the maximum rate of half an anna in the rupee under the Cess Act of 1880, which is in force in Dhalbhum and Porahat but not in the Kolhan. The expenditure of the Committee is mainly devoted to the maintenance of roads and the provision of water-supply in rural areas by the construction and repairs of reservoirs and wells. According to the latest returns, it keeps up 23 unmetalled roads with a length of 303 miles and 6 village roads with a length of 25½ miles."

Although the Local Self-Government Act was extended on the 1st April, 1920 the first general election of the newly formed District Board was held in 1923. The total number of members including the Chairman was 25, out of which 16 were elected and 8 nominated. The Board had a nominated official Chairman who was the Deputy Commissioner.

In the first general election of the Board some of the electoral circles failed to elect their members owing to the backward conditions of the areas and a general want of civic consciousness. Government had to nominate members from such circles and they were some of the leading tribal village heads, namely, *mankis*. The activities of the new Board were confined to education, communication and pounds only.

Prior to the general election in 1939 the total number of members was raised to 33, out of which 25 had to be elected and 8 nominated. The Chairman was also elected. The election of 1939 was keenly contested and the electors had come to appreciate their rights. The Adibasis took a great interest in this election. The first non-official Chairman of the Board was elected from amongst the Adibasis this year.

There was another election in 1949. Since then four members have died. There has been no further election after 1949.

The District Board has at present no Local Board or Union Board under it.

Income and Expenditure.

The income of the Board consists of receipts from pounds, motor vehicle taxation, fine and penalty, a small fee derived from the medical institutions and veterinary hospitals, rents from inspection bungalows and several other small items lumped as miscellaneous. The main income of the Board is, however, the cess income on an annual value of lands at the rate of one anna per rupee and 2 annas per rupee on the net profit of the sale

proceeds of forests and minerals. These incomes are supplemented by Government grants for various purposes, both recurring and non-recurring as well as earmarked grants for specific purposes. Earlier the Board used to derive a small fee from different schools. The expenditure of the Board is distributed over general administration, pounds, education, public health including water-supply, medical, veterinary, provident fund, stationery and forms, other works and miscellaneous.

The table below shows the income and expenditure of the Board for 1921-22, 1930-31, 1940-41, 1950-51 and 1956-57:—

Income.

Items of Income.	Years of Income.				
	1921-22	1930-31	1940-41	1950-51	1956-57
1	2	3	4	5	6
	Rs.	Rs.	Rs.	Rs.	Rs.
Cess	63,506	1,16,624	1,48,973	2,49,148	3,58,132
Pounds	3,978	4,176	6,502	3,900	337
Education	60,441	97,694	1,09,509	4,64,139	Nil.
Medical	Nil	21,826	22,311	75,961	1,68,512
Veterinary	1,150	926	1,418	6,017	942
Miscellaneous including Motor Vehicle Taxation.	532	3,241	12,377	14,205	41,254
Civil Works	1,00,454	80,722	72,994	1,21,820	2,12,360
Total	2,30,061	3,25,209	3,74,084	9,35,190	7,81,537

Expenditure.

Items of Expenditure.	Years of Expenditure.				
	1921-22	1930-31	1940-41	1950-51	1956-57
	Rs.	Rs.	Rs.	Rs.	Rs.
General Administration.	4,270	8,555	15,548	25,045	28,748
Pound police	244	839	3,342	4	28
Education	34,298	61,866	77,166	5,36,775	49,052
Public health (including water-supply).	Nil	Nil	11,338	66,482	1,43,577
Medical	4,703	22,772	32,009	63,415	1,09,015
Veterinary	1,539	5,482	5,535	13,510	18,812
Provident fund	1,532	2,449	1,691	4,213	5,364
Stationery and Forms.	1,539	2,715	2,025	4,577	5,268
Miscellaneous	5,632	1,525	2,506	2,501	2,426
Civil Works	1,48,055	1,83,205	1,30,005	2,96,161	4,54,350
Total ..	2,01,812	2,89,408	2,81,165	10,12,683	8,16,640

The statement for income will show that the cess income has shown a steady rise since the inception of the District Board. The increase is more spectacular in 1930-31, 1950-51 and 1956-57. The increase in 1930-31 is due to the fact that the rate of cess was increased from half an anna in the rupee to one anna in the rupee. The increase in 1950-51 was due to an increase in the cess on the profit of mineral produce from one anna in the rupee to one and half annas in the rupee in 1945 and again from one and half annas to two annas in the rupee in 1947.

The increased exploitation of forests and mines naturally meant an increase in the cess income for the Board. The figure for cess income for 1956-57 is due to this feature.

It may be mentioned that a considerable area of the district falls under the Government Khasmahal for which no cess is levied under the District Board. But a fixed sum of Rs. 15,000 is paid by the Government as State grant in lieu thereof. The increase in the income from education head is remarkable in

1950-51. This was due to an increased Government contribution as a subsidy to enhanced emoluments to the teachers. The income from this source disappeared in 1956-57 as the District Board was absolved of the responsibility of maintaining educational institutions with effect from the 1st May, 1954. Government have been contributing increased grant for public health measures and this explains the augmented income for medical purposes in 1950-51 and 1956-57. The fluctuations under the items of civil works are due to the variations in the non-recurring Government grant for this purpose.

On the expenditure side it will be seen that the expenditure on general administration has been increasing steadily. This is quite natural as the functions of the District Board are expanding and that is possible only if there is an increased staff. The provision of dearness allowance on account of higher price level of general commodities since the early forties has also meant more expenditure for the Board. The expenditure under education was rather spectacular in 1950-51 owing to a general higher salary to the teachers. A drop is noticeable in 1956-57 as the District Board was absolved from the responsibility of education with effect from the 1st May, 1954.

With the opening up of the interior of the district and the development of civic consciousness it is only natural that there should be a rise in the expenditure under public health. The Board offers more medical facilities now than what it did 20 or 30 years before. The expenditure on civil works shows a drop in 1940-41 and again a spiral rise. The drop was on account of a cut in Government grant for communication for maintenance of communication channels and the increase is attributable to the augmented Government grant for such purposes.

Civil Works.

The District Board has a certain amount of responsibility for the maintenance of civil works in the subdivisions of Sadar and Dhalbhum. The District Engineer is in immediate charge of the roads and buildings and other public works, the control of which has been vested in the District Board. The District Engineer is assisted by an Assistant Engineer[1] also stationed at the headquarters at Chaibasa. There are several sectional officers under the District Engineer. There are 11 Inspection Bungalows situated at Tirin, Swaspur, Ghatsila, Chakulia, Baharagora, Katbari, Jamda, Chakradharpur, Sonua, Chandil and Ichagarh maintained by the District Board for the supervision of District Board work by its officials and for officers of other departments and travellers.

In 1956-57 there were 196 wells maintained by the District Board and every year new wells are dug.

The District Board maintained about 217 miles of roads of different categories in Sadar subdivision and 240 miles in Dhalbhum subdivision in 1956-57.

It appears necessary to mention some details regarding expenditure on the maintenance of roads. The Government grant for improvement and maintenance of communication was Rs. 95,000 in 1920-21. Up to 1929-30 the annual Government grant was in the neighbourhood of Rs. 1,00,000. Gradually it was reduced to Rs. 50,000 in 1946-47. But from 1947-48 the Government grant for communication showed an upward tendency chiefly because the Government subsidised the District Board in bringing roads to the pre-war level. The condition of subsidy was that the amount of subsidy and the contribution by the District Board were to be in the ratio of 2:1.9, the Government paying the bigger share. The scheme was introduced in 1949-50 and was worked up to 1954-55. During this period the Government had paid a sum of Rs. 2,00,000 while the contribution of the District Board came to Rs. 1,90,000. This contribution from the Government was in addition to the grants that the District Board used to get. Some of the important roads were improved by the District Board with this help from the Government. There has been an increase in grants by the Government in 1956-57 on account of the Second Five-Year Plan. Naturally there was an increased expenditure on the improvement of communication in the same year.

The grant received by District Board from motor vechicle taxation for communication is rather small as compared to the mileage of roads that has to be maintained. As the district has a rich deposit of various minerals and forest produce, which are being well exploited now, heavy trucks loaded with stuff put a severe strain on the roads and make their condition bad. The District Board has the responsibility of repairing them at a huge cost with only Rs. 8,000 to Rs. 9,000 per annum at its disposal from the motor vehicle taxation grant.

The present condition of gravelled and *katcha* roads is considered unfit in the rainy season for intensive or extensive traffic. In view of the fact that the district contributes not a very inconsiderable sum by way of petrol tax and motor vehicle tax and also helps in earning dollars by export of different minerals, the condition of the roads should have been better.

With the improvement of the roads in the district of Orissa, particularly in the area near Barajamda-Barabil, which is so very rich in manganese ore, there will be heavier traffic on the roads in Singhbhum district in that area. Barajamda Railway Station in Singhbhum district on Tatanagar-Chaibasa-Gua line along with its five miles of siding extending to Barabil in Orissa is said to be booking manganese ore worth lakhs of rupees every month.

The bulk of the manganese ore comes from the neighbouring area in Orissa and there will be greater exploitation of the ore in the near future. Hundreds of heavily loaded trucks pass on the unmetalled roads every day in this area of Singhbhum district. The road to Noamundi and Gua will have much heavier traffic.

In view of the heavy traffic due to increased exploitation of mines, the Government gave a grant of Rs. 50,000 to the District Board in 1956-57 specially to improve the roads in the mining area. The roads to be improved are Chakulia-Matihana and Gamharia-Jamda and need be tar-macadamised to cope with the traffic.

It may be mentioned here that altogether about 98 miles of roads belonging to the District Board had been taken over by the Public Works Department by 1956-57 to bring them into better condition.

Education.

It has already been mentioned before that the expenditure of the District Board on education had been steadily increasing since the very inception of the Board. With the passage of time more schools were opened and aided by the District Board up to 1st May, 1954. It is from this date that the State Government divested the Board of the responsibility of education as a matter of general policy towards the District Boards in the State. At this time the District Board was maintaining 38 middle schools for boys, out of which 20 were Board managed and 18 Board aided; 63 upper primary schools for boys and 3 for girls, out of which 64 were Board managed and 2 Board aided; and 294 lower primary schools for boys and 11 for girls, out of which 299 were Board managed and 6 Board aided.

Although the Board is now free from the responsibility of education, it is required to contribute 10 per cent of its cess income to the Government towards education.

Hospitals and Dispensaries.

As mentioned before, the Board had very little to expend towards medical facilities in the beginning, but the expenditure has gradually been increasing and has been considerable since late forties. Taking together the medical and veterinary, the amount of expenditure was rather spectacular in 1956-57 as compared to 1950-51, the amount being Rs. 2,52,592 and Rs. 1,29,897 respectively.

In 1956-57 the Board maintained 18 Allopathic, 5 Ayurvedic and one Homeopathic dispensaries. Details regarding location, etc., will be found in the chapter "Public Health". It also maintained 5 veterinary dispensaries in the same year.

CHAIBASA MUNICIPALITY.

History.

The Chaibasa Municipality was established on the 1st April, 1875. The last election was held in 1957. At present the Board consists of 20 Municipal Commission ers of whom 17 are elected and 3 nominated (one being *ex-officio* member, viz., Civil Surgeon, Singhbhum). The area of the Municipality is one square mile divided into 12 wards. The population, as per 1951 census, is 16,474. The number of rate-payers was 1,938 in 1956-57, representing 11.76 per cent of the population.

According to the old Gazetteer of 1910 the number of ratepayers, according to the returns for 1907-08, was 1,301 representing 15 per cent of the population and the Municipal Board consisted of 13 Commissioners of whom 9 were nominated and 4 were *ex-officio* members.

Receipts and Expenditure.

The average receipt of the Municipality during five years, 1952-53 to 1956-57, was Rs. 2,11,053 and the expenditure was Rs. 2,15,311. The chief sources of income are the tax on holdings assessed at 9 per cent on their annual value and latrine tax at 6 per cent besides income from market, vehicles, etc. The incidence of taxation per head of population in 1956-57 was Rs. 2-4-7 only. The principal items of expenditure are conservancy, public works and education which accounted for 29.32 per cent, 23.54 per cent and 21.21 per cent, respectively of the disbursement in 1956-57. The number of houses in the Municipality is 2,961. The total length of roads within the Municipality is about 21 miles, of which about 8 miles are tarred, 1 mile waterbound macadam and 12 miles gravelled.

This picture could be better appreciated with the picture about 50 years before. This has been described as below :— "The average annual income during the decade ending in 1901-02 was Rs. 8,000 and the average expenditure was Rs. 7,000. In 1907-08 the receipts were Rs. 15,000, excluding the opening balance, and the total disbursements were Rs. 17,000. The main source of income is a tax on houses and lands, assessed at 7½ per cent on the annual value of holdings. This tax realised Rs. 5,330 in 1907-08, while Rs. 1,189 was obtained from a tax on animals and vehicles and Rs. 1,852 from a conservancy rate, latrine fees being levied at the rate of 3 per cent on the annual value of holdings. The incidence of taxation in that year was Re.0-15-6 per head of the population". (Last District Gazetteer of Singhbhum, Seraikela and Kharsawan, 1910.)

Education.

There are at present 16 schools, all primary, under the control of the Municipality. Of these schools 7 are under the direct

management and the rest are aided. Out of these schools, 11 schools are for boys and 5 for girls. Compulsory primay education is in force in the municipal area since 1941. There are 4 libraries, viz., Ram Mohan Roy Library, Swadhin Bharat Hindi Pustakalaya, Ganesh Library and Urdu Library. All are aided by the Municipality.

Water-Supply.

Drinking water is available from local wells and there is scarcity of drinking water in the summer season as almost all the wells dry up in this season. Recently a scheme for water-supply has been sanctioned by the Government. This is to be implemented at a cost of Rs. 11,47,000, of which half is to be treated as loan and half as grant. The work has been taken up.

CHAKRADHARPUR MUNICIPALITY.

Chakradharpur Municipality is an elected body which first came into being on the 1st April, 1918. It has an area of 2.21 square miles and according to the census of 1951, has a population of 19,948 persons. Its income in the year 1956-57, including Government grants and loans of Rs. 30,443 but excluding opening balance of Rs. 38,610 was Rs. 98,785 while its expenditure was Rs. 1,20,989 leaving a closing balance of Rs. 16,406. The principal items of income are holding and latrine taxes and license fees, while its principal items of expenditure are conservancy, public conveyance, general administration, public institutions, drainage and sewerage and public health. The incidence of tax per head of population comes to Rs. 2-13-5.

The Municipality maintains 12 miles of road, of which 2.66 miles are metalled and tarred, 2.13 miles gravelled and 7.21 miles *katcha*. There are altogether 13 schools either directly managed or aided by the Municipality. The arrangement of water-supply is from wells. The Municipality has arrangement for street lighting by electricity.

The present Municipal Board was constituted on the 25th May, 1951 and consists of 14 members of which 12 including the Chairman are elected and 2 are nominated.

SERAIKELA MUNICIPALITY.

Seraikela Municipality was first constituted in 1898 in the State of Seraikela under Bengal Municipal Act of 1884. Bihar and Orissa Municipal Act of 1922 was enforced in the area after its merger in Bihar in 1948.

The last election of the Municipality was held in 1956. The total strength of members is 10, out of which 8 are elected and 2 nominated. It has a very small area and a small population of 4,777 souls according to the census of 1951. Its acutal income

and expenditure is rather small being only Rs. 18,199-1-3 and Rs. 26,684-12-3, respectively in 1956-57. It received a grant of Rs. 1,100 and a loan of Rs. 2,400 from the Government in the year 1956 for the improvement of its roads. The principal items of income are tax on holdings, tax on vehicles, cart registration, rent of land and houses, ferry *ghat*, market fees, platform tax and fees from offensive and dangerous trades. The principal items of expenditure are office establishment, collection establishment and contingencies, street lighting, road repairing and cleaning, etc.

JAMSHEDPUR NOTIFIED AREA COMMITTEE.

The Jamshedpur Notified Area Committee has an approximate area of 28 square miles and, according to the census of 1951, it has a population of 1,99,874 souls*. The town was initially established as an employees' colony of the Tata Iron and Steel Company, Ltd. In course of years, it has developed enormously and now includes large sections of population who are not directly connected with the Company. At the time of its establishment, that is, in 1908, the town had a population of about 5,000 souls. But now it is a full-fledged city. To meet the demands of the growing city in 1944 the Company secured the services of the Architect and Town Planner of the State of Mysore, Dr. Otto Kœnigsberger, who prepared a Master Plan for the future development of Jamshedpur which has been substantially implemented.

The Jamshedpur Notified Area Committee was formed in the year 1924 under section 228 of the Bihar and Orissa Municipal Act, 1922, vide Government notification no. 5960-L.S.-G., dated the 21st June, 1924 with an area of 22 square miles acquired on behalf of the Tata Iron and Steel Company, Ltd. At that time the population was 57,360 according to the census of 1921. The area of the Notified Area Committee was further extended by 6 square miles in 1945 by the inclusion of Pardih, Mango and Dimna villages of Manbhum district and Baliguma village of Singhbhum district under the jurisdiction of the Committee, vide Government notification no. 951-L.S.-G., dated the 27th July, 1945.

The formation of the Notified Area Committee conferred certain statutory powers of town regulation on the Town Department of the Tata Iron and Steel Company, Ltd., and as such the Jamshedpur Notified Area Committee is in reality a department of the Company exercising certain statutory powers under the Bihar and Orissa Municipal Act of 1922. The Notified Area Committee now consists of 22 members. The Director of Town, Medical and Health Services of the Tata Iron and Steel Company is the Chairman and the Town Administrator is the Vice-Chairman of the Committee. Five other senior officers of the Company and the

*This population has gone up by several thousands of souls by now.

Subdivisional Officer, Dhalbhum are also its members. The Subdivisional Officer, Dhalbhum is the only Government official in the Committee.

The Committee levies no taxes for water-supply, sanitation, lighting, etc., as the Tatas have a proprietary interest in the area. Other allied companies have constructed houses of their own and the conservancy, water and lighting arrangements for their respective areas are with those companies. The public health and sanitation of the area are the responsibility of the Tatas. The Committee derives some revenue from bullock cart registration, registration of dogs, licensing of public vehicles, etc. Excepting some grants from the State Government for education, road development, etc., the entire expenditure of the Committee is borne by the Steel Company.

A statement of income and expenditure of the Committee for the year 1956-57 is given below to show the amount of income from and expenditure on the various items :—

RECEIPTS.

Balance on hand at the close of the last year—Rs. 3,53,078-8-3.

Revenue.	Estimate.	Actual.			Actual plus or minus.		
	Rs.	Rs.	a.	p.	Rs.	a.	p.
1. Tax on animals and vehicles ..	65,300	72,813	0	0	7,513	0	0+
2. Cart Registration fees	1,200	1,299	4	0	99	4	0+
3. Vehicles plying for hire	1,300	1,028	4	0	271	12	0—
4. Dog registration fees	1,800	1,878	0	0	78	0	0+
5. Offensive and Dangerous trades ..	13,500	20,861	0	0	7,361	0	0+
6. Chemist and Druggist	50	..			50	0	0—
7. Market and Slaughter houses .	4,750	4,765	0	0	15	0	0+
8. Pounds	3,100	3,149	0	0	49	0	0+
9. Fines under municipal and other Acts	8,000	8,306	0	0	306	0	0+
10. Grant for subsidy to teachers and staff	94,000	81,340	0	0	12,660	0	0—
11. Grant for educational purpose ..	12,400	40,486	0	0	28,086	0	0+
12. Grant for water-supply	2,500	..			2,500	0	0—
13. Grants for maintenance of roads ..	2,000	1,688	0	0	312	0	0—
14. Grant from Tisco for educational purpose.	60,000	..			60,000	0	0—
15. Grant from Tisco for extended area..	5,000	5,000	0	0	..		
16. Miscellaneous	1,000	1,036	11	0	36	11	0+
17. Deposits	800	4,873	0	0	4,073	0	0+
Total	2,85,700	2,48,525	3	0	28,176	13	0—
Opening balance	2,93,200	3,53,078	8	3	59,878	8	3+
Grand Total	5,78,900	6,01,601	11	3	31,701	11	3+

DISBURSEMENT.

	Estimate.	Actual.			Actual plus or minus.		
	Rs.	Rs.	a.	p.	Rs.	a.	p.
1. Office Establishment	16,050	12,904	1	0	3,145	15	0—
2. Office contingencies	3,400	3,659	3	3	259	3	3+
3. Tax collection establishment ..	18,700	14,527	1	0	4,172	15	0—
4. Tax collection contingencies ..	3,300	3,182	12	3	117	3	9—
5. Pension and gratuity ..	5,000	..			5,000	0	0—
6. Public safety, lighting, etc. ..	5,000	..			5,000	0	0—
7. Public health establishment ..	4,800	3,766	5	0	1,033	11	0—
8. Public health miscellaneous ..	2,300	636	7	0	1,663	9	0—
9. Pounds	1,000	564	8	0	435	8	0—
10. Public works establishment ..	1,925	973	13	0	951	3	0—
11. Building—Original works ..	1,30,000	..			1,30,000	0	0—
12. Road repairs	56,500	16,416	8	0	40,083	8	0—
13. Public instruction schools ..	86,400	45,384	10	0	41,015	6	0—
14. Public instruction library ..	18,500	10,008	2	0	8,491	14	0—
15. Printing and stationery ..	3,500	1,758	4	6	1,741	11	6—
16. Law charges	5,500	3,822	1	6	1,677	14	6—
17. Provident fund	3,325	2,401	6	0	923	10	0—
18. Miscellaneous for improvement of extended area.	80,300	1,874	13	0	78,425	3	0—
19. Unforeseen	16,500	..			16,500	0	0—
20. Government subsidy to staff and teachers.	94,000	81,792	5	0	12,207	11	0—
21. Deposits	500	2,458	8	0	1,958	8	0+
Total	5,56,500	2,06,130	12	6	3,50,369	3	0—
Closing balance ..	13,400	3,95,470	14	9	3,82,070	14	9+
Grand Total	5,69,900	6,01,601	11	3	31,701	11	3+

The statement of receipt and expenditure for 1956-57 shows the sound financial position of the Committee.

All educational institutions in the area of the Committee are maintained by the Tatas. The Committee pays some grant to the Steel Company for the purpose. Besides, it gives a sum of Rs. 4,800 per annum out of its own fund to the Harijan Schools. The Committee in its turn receives some grants from the Tatas as well as from the Government earmarked for educational purposes. Excepting a few miles of public roads, all other roads of the area belong to the Steel Company and are maintained by the Company.

The Jamshedpur Notified Area Committee has powers to institute cases under the Prevention of Food Adulteration Act.

JUGSALAI NOTIFIED AREA COMMITTEE.

This Notified Area Committee was constituted in January, 1924, vide Government notification no. 125-L.S.G., dated the 2nd January, 1924 with 8 members nominated by Government. The area was adjacent to Jamshedpur and was developing in an unplanned manner without proper roads and drains. Buildings were being constructed without conforming to the minimum standard of ventilation and sanitation and there were encroachments on the roads by buildings Government, therefore, constituted the Jugsalai Notified Area Committee to be responsible for municipal administration over this area.

The area covered by the Notified Area Committee is about half a square mile and is divided into 4 wards, namely, (1) Kachhary Mahalla, (2) Bazar Mahalla, (3) Nayabasti and (4) Puranibasti. The present number of rate-payers (holdings) is 1,225, that is, 6.6 per cent of the population which, according to the 1951 census, is 18,288.

The present Committee was reconstituted under Government notification no. 2207-L.S.G., dated the 7th March, 1953, with 14 members. The Subdivisional Officer, Dhalbhum is the *ex-officio* Chairman of the Notified Area Committee The present Committee includes the Town Administrator and the Chief Town Engineer of the Tata Iron and Steel Company. They are Company's nominees. They have been taken in as a result of a conditional help given to the Committee by the Company in establishing a water-supply system through pipes in its area.

The total income of the Committee, including the opening balance, was Rs. 2,55,360 while its expenditure was Rs. 2,35,022 in 1956-57. The main sources of income of the Committee are (1) holding, latrine, lighting and water taxes, (2) fees from the registration of vehicles, and (3) the fees collected for granting licenses. These three heads were responsible for 64.9 per cent, 9.4 per cent and 8.8 per cent, respectively of the total income of the Committee in 1956-57. The principal items of expenditure are conservancy (32.8 per cent), education (20.1 per cent), water-supply

(18.2 per cent,) general establishment (8.5 per cent), public works (7.3 per cent), lighting (3.2 per cent), medical (3.06 per cent) and drainage (2.1 per cent).

The basis of tax assessment is the annual value of holdings. The holding tax is levied at the rate of 12½ per cent, the latrine tax and the water tax at the rate of 7½ per cent each and the lighting tax at the rate of 1¾ per cent of such value. The incidence of tax per head of population is Rs. 10-6-5.

The total length of drains in the Committee is 13.09 miles, of which 7.57 miles are *pucca* and 5.52 miles *katcha*. The total length of roads maintained by the Committee comes to 6.57 miles, *pucca* roads being 4.62 miles and *katcha* being 1.95 miles. The street lighting consists of 162 electric lamp posts.

The Committee maintains 8 schools, of which 5 are lower primary schools (4 for boys and 1 for girls), 2 are middle schools (1 for boys and 1 for girls) and one is upper primary school for boys only.

The water-supply system through pipes was introduced in the area from the 1st April, 1954. Nearly 50 per cent of the cost of this scheme was met by the Tata Iron and Steel Company, Ltd. on the condition that two nominees of the Company will be included in the Committee.

There is an outdoor dispensary in Jugsalai and the Committee earlier met the major portion of its expenditure extending up to Rs. 6,000 a year, the rest being met by the Government. This dispensary has been provincialised since February, 1957. Besides, a maternity clinic is also maintained by the Committee. This centre is attached to the dispensary.

KHARSAWAN NOTIFIED AREA COMMITTEE.

The Kharsawan Notified Area Committee was constituted in 1950 under Government notification no. 2543-L.S.-G., dated the 14th March, 1950. Before this there was a Municipal Council looking after the sanitation and lighting. Its area is comparatively small. The population within its area is 3,438, according to the census of 1951. The Committee has not the liabilities of an ordinary Municipal Board. Education and public health are the direct responsibility of the Government. Communications are also the responsibility of the Public Works Department.

The income and expenditure of the Committee is very small. In 1956-57 it had an income of Rs. 13,984-11-0, including Government grant, and an expenditure of Rs. 18,720-2-0. In 1951 and 1956 the Committee received Rs. 7,000 and Rs. 3,300, respectively from the Government for the improvement of its roads.

GRAM PANCHAYAT.

General.

The Bihar Panchayat Raj Act received the assent of the Governor-General on the 12th January, 1948. The Act was enforced

in the six non-regulation districts of Chotanagpur including Singhbhum and Santhal Parganas from the 1st April, 1949. As Seraikela and Kharsawan had merged into the district of Singhbhum the Act came into force for Seraikela subdivision as well.

The Act aims at decentralising administrative and development problems to the village units and to establish a sort of village republic on the basis of all-round social and economic developments. On the one side the *gram panchayats* organise village volunteer force and function as a system of judiciary with the particular view of compromising cases, if possible, and to decide them, if they are not compromised, control crime and enforce the basic requirements of law and order and on the other hand they are entrusted with development projects, rural sanitation and education. They are required to solve the local agricultural problems, give the benefit of experience and technical knowledge to the agriculturists, make compost pits and distribute better class of seeds. On the educational front they are to run night schools, maintain schools and libraries. For public health and sanitation they have to propagate such technical knowledge as could easily be grasped by the villagers and also to manage dispensaries, allopathic, homeopathic and ayurvedic. Such public health measures as vaccination, inoculation and dispensing of ordinary medicines are their trust. They have further to construct minor irrigation schemes, wells, and maintain *ahars*. With the passage of time and more experience being gathered they are now to collect rent and be an essential unit with the district administration.

The executive of the *gram panchayat* consists of a *mukhiya*, a *sarpanch*, an Executive Committee and a *gram sewak*. All of them except the *gram sewak* are elected by the people of the village. The *gram sewak* is a paid Government servant and it is he who is to implement the schemes of the *gram panchayat*.

On the judiciary side the *mukhiya* and the Executive Committee have powers to impose a fine ranging from Rs. 25 to Rs. 50 The Executive Committee has the power to issue certificate to realise the cost of the work executed by the Committee. The *gram sewak* also works as the Bench Clerk in the *gram katchery* and in the Exeutive Committee where he does the official work of clerical nature. He collects taxes on behalf of the *gram panchayat* and also collects land revenue on behalf of the Government from the ex-zamindars whose zamindaris have been liquidated.

The story of the introduction of *gram panchayats* in the district of Singhbhum is somewhat different from that in the other districts of Bihar. In the other districts the introduction of the *gram panchayats* through the Bihar Panchayat Raj Act did not receive any opposition from the villagers. At the best it may be said that the *gram panchayats* are being developed at the cost

of the District Boards. The District Boards as they are constituted cannot properly discharge all the duties which are required of such local bodies in the set-up of a welfare State. The encroachment of the *gram panchayats* on some of the functions of the District Boards and practically replacing the Union Boards and the Union Committees is not an unwelcome development. But in the district of Singhbhum the introduction of the *gram panchayats* received initially a certain amount of opposition from the *mankis* and *mundas.* The *mankis* and *mundas* have been separately described in the chapter on "Adibasis". They were the customary heads of the villages and they had already been divested of a number of their previous functions. With their prestige partially shorn they looked upon this new institution with suspicion. The *mankis* and *mundas* were the links between the people and the administrative officials since the inception of the British administration in Singhbhum district. Any official would send for the *mankis* and *mundas* for any particular work in their villages. They were to collect the rent on behalf of the landlords and enjoyed a very high prestige. It was only natural that they should look upon this institution of *gram panchayat* based on election with their multi-purpose aims with a certain degree of misgivings. But this cloud of suspicion is melting and some of the *mankis* and *mundas* have been elected in the *gram panchayats* in special circumstances.

There are in all 4,195 villages in the district. Till the end of 1956-57 altogether 426 official *panchayats* [notified under section 3 (1) of the Bihar Panchayat Raj Act] had been formed in their 3,689 constituent villages. In the different subdivisions their number was 200 in Sadar subdivision (1,393 villages), 132 in Dhalbhum subdivision (1,377 villages) and 94 in Seraikela subdivision (919 villages).

The following statement shows the number of cases disposed of by the *gram panchayats* from 1952 to 1956 :—

Year.	No. of cases brought forward from previous year.	No. of cases filed during the year.	Total.	Compromised.	Convicted.	Dismissed.	Total disposal.	Pending.
1	2	3	4	5	6	7	8	9
1952	68	944	1,012	635	51	294	980	32
1953	32	562	594	245	101	204	550	44
1954	44	658	702	533	86	53	672	30
1955	30	525	555	334	98	71	503	52
1956	52	474	526	342	47	106	495	31

The statement below gives the income from different sources of *gram panchayats* in each subdivision and also the expanding figures of expenditure for the year 1956-57 :—

Subdivisions.	Income.									Expenditure.		
	Property tax.			Labour tax.			Subscriptions and donations.					
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
Sadar subdivision	782	14	0	1,69,955	0	0	3,940	4	6	1,04,544	3	0
Dhalbhum subdivision	116	0	0	55,807	0	0	8,602	9	0	45,130	9	0
Seraikela subdivision	.			24,523	0	0	1,260	7	0	18,400	0	0
District Total .	898	14	0	2,50,285	0	0	13,803	4	6	1,68,074	12	0

CHAPTER X.

MANUFACTURE AND TRADE.

MANUFACTURE.

Singhbhum district is singularly fortunate in the richness of natural resources. These resources are mostly either minerals or forest products but the district was industrially very backward till 1907 when the Tata Iron and Steel Co., Ltd., was founded which was followed by the establishment of other concerns.

The industries in this district can broadly be classified under three heads. Firstly, there are heavy and organised industries carried on large scale and run by the help of power, viz., (1) iron and steel, (2) engineering, (3) food industry, (4) chemical industry, (5) copper reduction industry, (6) cement industry, (7) glass industry, (8) hume pipe industry, (9) wood working industry, etc. In the second category, small scale industries carried on usually without the use of power may be included such as (1) tusser rearing industry, (2) *biri* making industry, (3) bucket and trunk manufacturing, (4) ice and ice-candy manufacturing, (5) small wood working factories, (6) handloom weaving, (7) lac industry and other small cottage industries such as basket making, pottery, bamboo-umbrella making, rope making, etc. In the third category, the mining industry occupies a prominent position. There are 60 factories running with power and 350 factories running without power registered under the factories Act. Besides, there are 173 factories under section 85 of the Factories Act.

The story of the growth of iron and steel industry followed by the development in engineering industry has been dealt separately. Besides the various plants in the concerns of the Tatas, there are in Jamshedpur and its neighbourhood the Indian Steel and Wire Products, Ltd., the Tinplate Co. of India, Ltd., the Tata Locomotive and Engineering Co. Ltd., the Indian Cable Co., Ltd., the Indian Copper Corporation, Ltd., etc. A short description of each of these concerns will be found elsewhere excepting the Indian Copper Corporation which along with several other industries has been described in this chapter.

The large factory population has naturally led to the establishment of a number of concerns engaged in rice milling, wheat flour and oil crushing industry. A large number of small oil and *atta* mills have been established at Tatanagar, Chaibasa, Chakulia and Chakradharpur. There are 112 registered flour, *dal* and rice mills in the district.

The demands for heavy chemicals have naturally increased with the establishment of big iron and steel and engineering

concerns at Jamshedpur. Although most of the big factories have got their own arrangements for manufacturing chemicals for their own consumption, there are a few chemical factories at Jamshedpur which are producing heavy chemicals. M/s. Oxygen and Accetylene Co., Ltd., Burnpur have opened their factory at Jamshedpur inside the premises of M/s. Tata Iron and Steel Co., Ltd. This concern supplements Tata's own manufacture of hydrochloric and sulphuric acids.

Copper Industry.

The Indian Copper Corporation, Ltd. in Singhbhum is the only Copper Corporation in India. Copper is one of the oldest known minerals.

The Indian Copper Corporation was incorporated to take over the property of the Cobra Copper Co. In 1927, the management of the Indian Copper Corporation passed to the Anglo-Oriental and General Investment Trust, Ltd., and the new management by under-writing debentures to the extent of £350,000 provided the necessary funds for the erection of a mill and smelter at Maubhandar (near Ghatsila on the South-Eastern Railway). Smelting commenced in 1929 and a year later on the completion of a rolling mill, the first yellow metal sheet was produced. In 1931 the technical management of the Indian Copper Corporation was vested in the New Consolidated Gold-fields, Ltd., of South Africa and in 1933 further capital was raised for plant expansion. On the average 3,831 males and 189 females work in the copper mines whereas 1,392 males and 181 females work in the factory. The approximate annual production is 7,600 long tons as against its annual capacity of production of 7,750 long tons of copper.

Cement Industry.

Cement industry has led to the establishment of one of the biggest cement producing plants in India by M/s. Associated Cement Co., Ltd., at Jhinkpani near Chaibasa. The factory commenced manufacturing operations from the 1st January, 1947 and its production capacity was 1,00,000 tons a year. The second kiln was installed on the 17th May, 1949 and since then its capacity was doubled, i. e., 2,10,000 tons per year. Its actual production in the year 1955-56 was 2,04,936 tons, that is, 97.6 per cent of the rated capacity. The plant is under expansion and by 1958-59 its rated capacity is expected to be 3,15,000 tons. The concern has a scheme to set up a plant for the utilization of granulated blast-furnace-slag of Tisco and thereafter this cement work is expected to have the rated capacity of 4,70,000 tons per year.

There are about 2,100 male and female workers working in the factory and quarry both. The cement has a ready market in the States of West Bengal, Bihar and Assam.

Glass Industry.

Messrs. Seraikela Glass Works, Ltd. is located at Kandra, a few miles away from Jamshedpur. The area was at first in the Feudatory State of Seraikela that has now merged into Bihar. This factory is engaged in producing glass sheets and glass tubes and has recently been very much expanded. The machines are run by electricity generated inside the factory. Its monthly production capacity is 24,00,000 square feet of glass sheets. In the year 1956-57 it produced 2,23,49,785 square feet of glass sheets. In 1957-58 there was a production of 2,61,00,492 square feet of glass sheets. The present daily average attendance of workers is 515, both male and female as against the total strength on roll of 744.

Saw Milling and Wood Working Industry.

The forests of Singhbhum with their fine *sal* (*Shorea robusta*) and other useful timbers have naturally led to the growth of this industry. The centres are Jamshedpur, Chaibasa, Chakradharpur and Manoharpur. A big quantity of wooden bobbins and wooden tool handles for the jute and cotton mills are made in this district. There are 22 registered saw mills in the district.

Tusser Industry.

Tusser industry is one of the oldest industries in the district and is carried on by the Hos, the main Adibasi class in the district, as a subsidiary occupation to agriculture. It is estimated that in the Kolhan and Porahat, the average number engaged in this industry will be near about 10,000.

Unfortunately, the industry has had a big decline. One of the causes of the decline of the industry has been said to be the realisation of the royalty of 8 annas per hundred cocoons or Rs. 1-4-0 as *Dal Kati* tax per family. The trees were also not given any rest and died out very fast. The loss of trees has not yet been made good by plantation. Killing of food plants (*Terminalia tomentosa and Terminalia arjuna*) by cutting them down, over-pollarding or by constant use without rest are also other reasons for the decline of the industry. The difficulty in the availability of *munga* seed cocoons has also affected the industry. The Forest Department auctions out the *munga* seed cocoons and the contractors sell them at fancy price.

A model *Tusser* Silk Rearing Farm was established in 1906 but after the death of the first officer in-charge in 1937, the farm was neglected. In 1936, the present Tusser Seed Supply and Research Station was established by the Government of Bihar (1) for the supply of disease-free eggs to the *Tusser* rearers, (2) to evolve a vigorous race by crossing *Tusser* with some other wild race which will yield round and adhesive filament instead of flat ones, (3) to rear and pair *Tusser* worms and moths in captivity which will effect regular emergence of moths and oviposition, (4) to carry on

experiments on rearing on different food plants. It is expected that the useful work done by this Research Station will revive the industry to a certain extent. But it will not be possible to avoid the effects of the availability of artificial silk unless the price of *tusser* could be brought down. As a subsidiary occupation it engages a very large number of people.

Biri Industry.

Biri making is the chief cottage industry in the district giving employment to about 30 to 40 thousand labourers. The sales tax paid by the merchants to Government amounts to several lakhs of rupees and about 25 lakhs of rupees is paid as Central Excise duty on the tobacco consumed in the manufacture of *biri*. There has been a very heavy investment of capital by merchants in this industry. There are 343 registered *biri* manufacturing concerns in the district. Besides, there are several thousand unregistered factories. Singhbhum forests grow *kendu* trees abundantly. The *kendu* leaves are used as the outer coverings of *biri* which offer a much cheaper smoke to the common man.

A huge quantity of kraft papers, tissue papers, ordinary label papers, tobacco leaves, yarn, etc., required for the manufacture of *biri* are imported. Tobacco for the *biri* is imported from Gujrat. It is understtod that about 35 thousand maunds of tobacco used yearly for making of *biri* in Singhbhum is consumed in the State. The main centres of this industry are Chakradharpur, Sonua, Manoharpur, Jamshedpur and Chaibasa. The majority of the workers in the *biri* industry are below 17 years of age. The rate of wages vary from 6 annas to Rs. 1-8-0 per thousand of *biri* manufactured. Recently Government fixed a minimum rate of wages for *biri* workers at Rs. 2-8-0 per thousand. This had led to a great upset in the industry and many of the factories have been closed as the *biri* merchant thinks that this rate will be uneconomical. The *biri* industry is passing through a crisis but it is expected that normal conditions will be restored soon.

Soap Making

There are about 15 soap works at Tatanagar, Chakradharpur, Chaibasa, Ghatsila, Chakulia and Manoharpur. The Adibasis wear scrupulously clean clothes and a huge quantity of soap is sold in each of the *hats*.

OTHER INDUSTRIES.

Bakery, hosiery, rope making from *sabai* grass, carpentry, soft drinks and carbonated water manufacturing, ice-cream and ice-candy manufacturing, electroplating, goldsmithy industries are some of the other industries that give employment to several thousands of persons. Stone work used to be rather important previously

but owing to influx of china-clay potteries, aluminium and plastic wares, this industry has declined. Road transport has been nationalised in the town of Jamshedpur. The district has very good roads and many places are well connected. This has given rise to a large number of carrier trucks, passenger buses and taxis. The transport of timber, ores, etc., is partially carried on by the trucks. The motor transport industry gives employment to several thousands of persons in the district. Eighteen motor vehicle repair shops are registered under the Factories Act. There are many more unregistered distributed all over the district.

Among other small scale industries mention could be made of lac and shellac, printing press, ceramics, cloth weaving, trunk manufacturing, etc.

A considerable quantity of lac and shellac is manufactured at Chakradharpur and Chandil. There are 11 registered lac factories and many unregistered ones. The printing press industry finds place only at Chaibasa and Jamshedpur. Twenty such concerns are registered under the Factories Act.

The ceramics works were first started in 1943 in village Karanjia in Rajkharsawan. The factory manufactured crockery and electrical goods both by jiggering and moulding processes, but could not stand in competition with the foreign products, particularly from Japan after the Second Great World War. Owing to wagon difficulties, the concern could not get the required china-clay of Taljhari (Rajmahal) and gypsum to improve the product. The factory was finally closed in 1948. Pottery industry is carried on in the different parts of the district by indigenous methods.

Cloth weaving by indigenous methods is carried on at different places in the district. As the products are rather coarse, they are consumed by the Adibasi population of the district.

Trunk manufacture on small scale is carried on at Jamshedpur, Chaibasa and Chakradharpur.

Each of these industries gives employment to several thousands of people.

TRADE.

Places of Export.

It will be interesting to note the places where the products of the district are exported. Manganese although not found in abundance has a good market and is exported to the United Kingdom, U. S. A. and Japan. Chromite and kyanite have foreign markets but exports are very restricted at present. A limited quantity of asbestos that is available is exported to West Bengal. Iron ore which is found in abundance has a good

market and the main consumers in India are the iron foundries. Iron ore is also exported to U. K., U. S. A., Japan and other foreign countries. The main consumers of the china clay of this district are the paper mills, textile mills, paint and rubber factories. China-clay found in the district is exported to almost all the States of India. Sabai string produced as a cottage industry has a local consumption and is also exported to West Bengal. A huge quantity of tamarind from Singhbhum district goes to Madras. Good and seasoned timber available in the district is exported mainly to West Bengal and the coalfield areas of Bihar. Besides local consumption, a big quantity of *biri* made in the district finds a ready market in Orissa, West Bengal, Rajputana and East Pakistan. Lac has a market in foreign countries and very little of it is consumed in this State. Bamboo goes to the Paper factories.

During the First World War (1914-1918), the Tata Iron and Steel Co. had supplied about 2,90,000 tons of steel to Government for ammunition besides shellbars In the Second World War (1939---1945) they had supplied bullet proof armour plates, high speed shells for machine tools, bullet proof plates for howitzer sheets and gun turrets, nickel chrome, steel rounds for the manufacutre of 18-pounder and 25-pounder armour piercing shields and high carbon steel for various calibre guns. At the request of Government special high alloyed nickel manganese known as magnetic shield was developed for use in service helmets. All these articles were requisitioned by Government and distributed.

TRADE CENTRES.

The important trade centres within the district are Chaibasa, Jamshedpur, Chakradharpur, Barajamda, Hatgamaria (Kendposi), Gua, Noamundi, Manoharpur. Sonua, Goelkera and Chandil. Chaibasa has a great turnover in foodgrains. Barajamda is the centre for manganese ore, iron-ore and forest produce. Gua, Noamundi and Manoharpur export iron-ore and timber. Sonua and Goelkera are noted for tho turnover in timber. Hatgamaria is an important trade centre for china-clay. Chakradharpur being an important railway centre has a very big business in timber, bamboo, *biri* and shellac. Chandil is important for lac and shellac business.

Hats and Melas.

The *hats* and *melas* of this district are very important trade centres. The weekly *hat* at Chaibasa town attracts more than ten thousand persons from outside. There are weekly *hats* in almost every important area and merchants come from far to the *hats* to sell their goods. The *melas*, which are mentioned in the "Directory" chapter, have also a big turnover of goods. The *hats* and *melas* of the district are a part and parcel of the life of the common man and usually form the basic centres for feeding bigger trade centres.

CHAPTER XI.

MEANS OF COMMUNICATION.

Means of Communication—A Century Back and Now.

Singhbhum was brought under the direct management of the East India Company in 1837 because it was found that the Chiefs of Singhbhum and Mayurbhanj who ruled Kolhan could not control the Kols. The problem was acute for the British rulers as well and great attention had to be paid for the opening up the district by well connected roads. In the famous despatch of J. Wilkinson, Agent to the Governor-General, dated the 13th May, 1837, to Lieutt. Tickell, Assistant to the Political Agent, South-West Frontier, there is a directive regarding the roads to facilitate the working of the markets and also for administrative purposes. Wilkinson gave a set of instructions to Tickell who was appointed as the Assistant in the Political Department of the Agency for the purpose of taking charge of the Kol *Pirs*, in Singhbhum and Bamanghatty which had been brought under the direct management of the British Government. The administration had to be consolidated through the help of the *mankis* and *mundas* and it was all the more necessary to have ready access to the village through good roads. But it was a great task and not much progress was done in the first twenty years.

In the report on the district of Singhbhum written in 1854, by Mr. H. Ricketts, member of the Board of Revenue, it has been mentioned that although the district had become a separate charge in 1837 there was a great want of means of communication. He mentions, "The want of roads also is a great impediment to progress of any kind. During the dry season very strong carts can travel with much difficulty from Chaibasa through Dhulbhoom via Nursengurh and Baharagora on the Bombay road to Midnapur but the difficulties are great. The Subarnarekha river passes through the Pergunnah from north-west to south-east but the bed is so rocky that it is in all places dangerous and a few miles west of Gopeebullabpur there are falls by which the passage of boats is entirely prevented. As the river becomes almost dry during the hot months in all probability there would be no great difficulty in clearing a passage for boats by means of gunpowder and should it be determined to metal the Cuttack road it might be worth while to enquire whether the stones and gravels of Dhulbhoom could not be made use of to advantage. For one rupee 30 maunds of limestone could be placed by the riverside within two days drifting from Rajghat."

When the insurrection broke out in 1857 it was found that bad roads were a great impediment. The British Government practically fell back on the Grand Trunk Road for defence and

consolidation, as some of the letters of E.T. Dalton, Commissioner of Chotanagpur Division, to the Secretary to the Government of Bengal, Fort William, show. The despatches of Dalton throw a good deal of light on the condition of communications in Singhbhum district. As a matter of fact, it was difficult for Dalton to get much information from Chaibasa in the fourth week of September, although the insurrection had broken in Chotanagpur before August, 1857. In his despatch dated 23rd September 1857 Mr. Dalton informed the Secretary to Government of Bengal, Fort William regarding Chaibasa, "I have no later reliable news than what you are in possession of, but have received a verbal report that the Porahat Raja had promised to go to Chaibasa and Lieutt. Birch in consequence not found it necessary to advance."* Bad roads were a handicap to the administration and as soon as the insurrection subsided the Government took up the charge of making proper roads and bridges energetically.

After a century now it could be said that Singhbhum district is one of the most advanced districts in the State of Bihar so far as roads are concerned. The rapid progress in road communication is partly due to the fact that along with the District Board and Public Works Department, the Forest Department too has taken up the maintenance of some of the roads. The district is one of the most important areas in the world so far as mines and minerals are concerned and naturally good roads had to be made to open up the countryside.

Besides the network of roads the district is now well served by the railways with a number of important stations. There are now air strips at Chakulia, Jamadoba, Jamshedpur and Chaibasa. The district has got an extensive and good postal system and telephone call stations. In the city of Jamshedpur the Steel Company maintains and operates the telephone system for the works and the town under a license granted by Government of India. The Second Great War indirectly helped a further progress in the development of the means of communication owing to the great industrial and mineral importance of the district. Jamshedpur, the great steel town of the East had to be closely protected and roads were made better, telephone, postal and telegraph systems extended and air strips were constructed for quick military movements.

Roads.

In the district of Singhbhum roads are maintained by the Public Works Department, the District Board, the Forest Department and by the Khas Mahal, known as the Kolhan Government Estate.

---

*See "Singhbhum old Records" published seperately (P. C. R. C.).

The Public Works Department maintains 210 miles of road, 111 miles metalled and 99 miles unmetalled. The District Board maintains 31.2 miles of metalled and 425 miles of gravelled and earth surface roads. Recently the District Board has transferred about 70 miles of its roads to Public Works Department. The Kolhan Government Estate maintains 307 miles of roads lying both in Kolhan and forest areas. The Forest Department maintains 873 miles of roads which are usually *kutcha* and fair-weather roads. The Forest Department roads are distributed as follows :—

(1) Dhalbhum Divison	69 miles.
(2) Saranda Division	275 miles.
(3) Chaibasa Division	88 miles.
(4) Kolhan Division	259 miles.
(5) Porahat Division	182 miles.

Roads maintained by the Public Works Department.

The following roads are maintained by the Public Works Department out of which 75.5 miles of road are classed as National Highway—

Names of Roads.	*Classification mileage.*
(1) Ranchi-Chaibasa (district border) National Highway *via* Chakradharpur	49.50
(2) Chaibasa-Jaintgarh	36. 6
(3) Chaibasa-Haludpokhar-Jamshedpur National Highway and Provincial Highway	37.26
	123.36

The alignment of National Highway no. 33 covers the Chaibasa-Chakradharpur-Ranchi (Singhbhum district border) Road and the Chaibasa-Haludpokhar Road for a length of 75.5 miles. The maintenance of the above 75.5 miles is done from the National Highway grants made by Government of India.

The total length of the road from Chaibasa to Ranchi is 88½ miles, 49.50 of which lie within the district of Singhbhum and is tarred. It enters the district at Bandgaon where there is an inspection bungalow and passes through the famous Tebo Ghat stretching up to 22 miles, crosses Chakradharpur and joins Chaibasa. It is fairly levelled between Chaibasa and Deogaon which is 993 feet above the sea level, but takes a sharp rise into the hills, runs in a zigzag course and reaches a height of 1,683 feet at Tebo, 7 miles beyond Deogaon. In this portion there are many hair-pin bends and the gradient at some places is as steep as 1 in 25.

The Chaibasa-Jaintgarh Road has a length of 36½ miles in the district and after crossing the Baitarani river at Jaintgarh through an important iron bridge joins the State of Orissa at Champua.

The Chaibasa-Jamshedpur Road which has a portion of 26 miles unmetalled and 11½ miles metalled beyond Haludpokhar connects Chaibasa with Jamshedpur town. Haludpokhar is an important link between the States of Bihar and West Bengal. The Chaibasa-Jamshedpur Road has a very big vehicular traffic. There is a proposal to make the Chaibasa-Haludpokhar portion a tar-sealed one. This road came under the jurisdiction of Public Works Department since the war, as on account of military traffic the road had deteriorated and needed immediate improvement. The road from Chaibasa to Haludpokhar is classified as National Highway while the remaining portion from Haludpokhar to Jamshedpur is classified as Provincial Highway.

Another important road joins Jamshedpur and Purulia *via* Chandil and has been recently provincialised by the Government. Although only 27.5 miles of the road lies within the district, it has its importance in view of the heavy traffic both passenger and goods passing through the road.

Due to the merger of Seraikela and Kharsawan States in the State of Bihar in 1948, roads maintained by the two former States have been taken over by the Public Works Department. The important roads in Seraikela and Kharsawan are —

(1) *Chaibasa-Seraikela-Chandil Road* has a length of 24½ miles out of which a portion is maintained by the District Board. It is gravel-topped road and passes through Seraikela town, Doogny Kandra and ends at Chandil.

(2) *Kandra-Adityapur Road.*—It takes off at the thirty-second mile of Chaibasa-Chandil Road and goes up to Adityapur which is on the west of river Kharkai opposite to Jamshedpur. It is an all-weather gravel-topped road with a length of 11 miles. There is a proposal to develop a township at Adityapur which will be an excellent exodus for the population of Jamshedpur and in case the idea fructifies this road will be of more importance.

(3) *Seraikela-Kharsawan Road.*—This road is 11 miles long and is an all-weather gravel surfaced road. To provide better communication facilities between the two places a bridge has been recently constructed by the Public Works Department over the river Sanjai, five miles from Gobindpur at a sanctioned cost of Rs. 2.36 lacs. The bridge consists of ten contiguous arches of 22′ 0″ space.

(4) ***Kharsawan-Amda Road.*—This is a 6 mile long fair-weather road connecting Kharsawan town with the railway station at Amda. Traffic on this road is heavy owing to kyanite mines.**

There is a scheme of increasing the Public Works Department mileage by adding 347 miles during the next 15 years.

Roads maintained by the District Board.

Among the main District Board roads mention could be made of the following :—

(1) *Chaibasa-Bhalandia Road* with a length of 27 miles and running through Kokcho and Kathbari.

(2) *Hatgamaria-Gua Road* which has 28 miles length and runs through the important places of Jagannathpur, Noamundi and Jamda. This is a very well frequented road owing to the important mining centres, Noamundi and Jamda. The road needs much improvement.

(3) *Singhpukheria-Parsa Road* is 31 miles running *via* Asura and Bhalandia.

(4) *Haludpokhar-Baharagora Road* which is 66 miles long and runs through the important market places, Maubhandar, Ghatsila and Chakulia. Ghatsila is also a popular health resort. Chakulia has an air strip.

(5) *Chakradharpur-Sonua Road* is 14 miles. From Sonua one can go to Bamiaburu which is a beauty spot. The place has a rest bungalow and offers a wonderful panorama of scenic beauty. The distance between Sonua to Bamiaburu is 12 miles and the road passes through country where big games including wild elephants are available in the jungle nearby.

(6) *Anandpur-Manoharpur Road* has a total length of 8 miles. Manoharpur is a place of commercial importance.

(7) *Chaibasa-Bhoya Road*—14 miles.

(8) *Tiring-Motigara Road*—16 miles.

Roads maintained by Kolhan Government Estate.

The main roads maintained by the Kolhan Government Estate are —

(1) *Tatanagar-Bharbharia Road* running *via* Chitimiti and Tonto—10 miles.

(2) *Hatgamaria-Benusagar Road*—30 miles running *via* Bhalandia, Kharbandh, Andhari and Majhgaon.

(3) *Majhgaon-Jagannathpur Road* is 28 miles in length. There are three unbridged big rivers across the road.

The Khas Mahal Improvement Fund was created in 1951-52. The amount of recurring grant allotted to the Khas Mahal for the improvement of roads from 1951-52 to 1956-57 is given below :—

Years.			Amount.		
			Rs.	a.	p.
1951-52	..	..	51,299	9	0
1952-53	..	..	47,372	10	0
1953-54	..	..	49,682	1	6
1954-55	..	..	65,771	0	0
1955-56	..	..	67,088	9	0
1956-57	..	..	63,684	1	0

Out of this fund the Khas Mahal maintains now 21 roads measuring a total distance of about 307 miles. The most important road maintained by the Khas Mahal is a fair-weather road connecting Seraikela and Rajnagar through Titirbilla.

Rest Bungalows

The district of Singhbhum has a network of rest bungalows and provides fairly convenient accommodation in them. Tourism could very well be developed in this district because of this facility and good roads. There are bungalows maintained by the District Board, Forest Department, Public Works Department and Kolhan Government Estate. On the Ranchi Road there are bungalows at Bandgaon, Hesadih, Nakti, Chakradharpur, Chaibasa, Jorapokhar, Hatgamaria and Jaintgarh. On Hatgamaria-Gua Road there are bungalows at Jagannathpur and Jamda. On Chaibasa-Bharbharia Road the Kolhan Government Estate maintains bungalows at Kokcho and Bharbharia. The District Board maintains a bungalow at Katbaria. On Hatgamaria-Benusagar Road there are bungalows at Kharbandh, Majhgaon and Benusagar. On Chaibasa-Baharagora Road the District Board maintains bungalows at Rajnagar, Tiring, Ghatsila, Chakulia, Manusmuria and Baharagora. There are both inspection bungalows and a Circuit House in Jamshedpur. In the areas added to the district in 1956 there are rest bungalows at Ichagarh, Patamda and Chandil.

Roads in Jamshedpur.

The town of Jamshedpur has got a network of about 150 miles road maintained by the Steel Company which are beautifully laid and stand comparison to the best roads in any part of the world. The arboriculture shows a remarkable aesthetic sense and study of the local conditions. There are about 8,000 well selected roadside trees that add a touch of beauty to the town. The tree plantations keep down the temperature of the steel town.

VEHICLES.

Among the vehicles on the road first mention has to be made of the *sagar* which is a low narrow cart with a pair of wheels, about 2½ feet in diameter suited for bad roads. The *sagar* is made of solid wood and is drawn by a pair of bullocks. Cycles have become common and on the *hat* days long distances on the roads are covered by cycles by small pedlars who also carry their merchandise on the same cycle. Motor buses and trucks, both private and public carriers, have become very popular. Private cars on these roads were rare only 20 years back. Motor cycles are very few and are mostly confined to Jamshedpur. Cycle rickshaws and hand-pulled rickshaws are common in the urban areas other than Jamshedpur. Horse-drawn carriages are rare in Jamshedpur and are fast fading away in other urban areas as well. There are a large number of taxis in Jamshedpur. Light taxis are more popular.

STATE TRANSPORT.

The State Transport Department has four long distance routes for bus service. These are (1) Adityapur-Chaibasa; (2) Kharsawan-Adityapur; (3) Seraikela-Sini; (4) Karaikela-Seraikela. The services are controlled by the Subdivisional Officer of Seraikela. As a matter of fact, these bus services in Seraikela subdivision pioneered the State Transport Department in Bihar. Prior to the 14th August, 1952, Jamshedpur town had bus service which was run by private companies, Messrs Jamshedpur Bus Service and Motor Accessories, Ltd. The State took over the entire assets of the company which consisted of 40 vehicles and a repair shop. The entire staff of the company too was taken over by the State Transport Service. The State Transport started functioning from the 14th August, 1952.

By the 13th August, 1953, i. e., within one year's time, the number of buses was increased from 40 to 45; the route mileage covered too was increased from 21 miles to 45.2 miles; the number of routes has increased from 13 to 15.

In June, 1957 the total number of Rajya Transport buses in the district was 57 and the total route mileage covered by them was 261.7. The number of services plying in the different routes of the district was as follows in 1957 :—

Names of routes.	*Number of services.*
Jamshedpur Town	37
Jamshedpur-Chaibasa	12
Jamshedpur-Haludpokhar	1
Jamshedpur-Musabani	3
Seraikela Subdivision	4
Total	57

PUBLIC VEHICLE TRAFFIC.

Permits for passenger transport and goods traffic vehicles are issued by the Regional Transport Authority at Ranchi. The roads maintained by the Public Works Department are open to vehicular traffic throughout the year. But the Forest Department and the District Boards are still opposed to allow transport vehicles on their roads principally because of the unsatisfactory condition of the roads. The main bus passenger routes are Chakradharpur-Jamshedpur, Chaibasa-Jamshedpur, Chakradharpur-Chaibasa, Sakchi-Purnapani, Baharagora-Chakulia, Seraikela-Sini railway station, Jamshedpur-Musabani, etc. The number of trucks, both public and private carriers, was 996, motor cars 348, buses 37 and taxi cars 190 in March, 1957.

HIGHWAYS AND THE FIVE-YEAR PLANS.

Before the commencement of the First Five-Year Plan, there were some good P. W. D. roads in Singhbhum district such as Chaibasa-Ranchi, Chaibasa-Jaintgarh, Chaibasa-Jamshedpur, etc. But under the First Five-Year Plan, a number of other roads were also taken over in the district and improved.

Under the Second Five-Year Plan other roads will be taken over and it is expected that at the end of Second Five-Year Plan there will be 298 miles of P. W. D. roads in the district.

In the programme for 1956-57 two new roads, namely, Jamshedpur to Galudih *via* Narsinghpur and Anandpur-Manoharpur were taken up. The road from Jamshedpur to Galudih *via* Narsinghpur measures 22 miles and will connect Jamshedpur with areas east of it. It passes through an undeveloped belt rich in mineral deposits. The road from Anandpur to Manoharpur measures 7 miles. It starts from Anandpur and crossing South Koel river ends at Manoharpur railway station. This road passes through an area which has no other means of communication, which is necessary for the development of the area. This will serve as a feeder road to Manoharpur railway station.

Another important link, a bridge over Kharkai river at Adityapur, is also to be taken up. This bridge will be linking up Jamshedpur with Adityapur. Adityapur is expected to be a prosperous satellite town of Jamshedpur with all modern facilities. A township has already started growing at Adityapur under a definite plan.

In the Second Five-Year Plan it is also expected that the Municipalities and the District Boards will improve some of their roads with the help of grants given to them. It is also proposed to improve the roads in bazars of non-municipal areas and to construct village roads linking them up with the nearest District Board or Public Works Department roads.

WATER COMMUNICATION.

The rivers are not navigable and do not come in for any comment although some timber is rafted down some of the larger streams, such as the Subarnarekha and the Koel. The number of ferries in this district is very small. They are as follows :—

(1) Mango ferry on river Subarnarekha near Jamshedpur.

(2) Maubhandar ferry near Ghatsila on Subarnarekha river.

(3) Anandpur ferry on river Koel, on Anandpur-Manoharpur Road.

The ferries are unimportant as they ply only in the rains and are used for passenger traffic alone.

RAILWAYS.

The district of Singhbhum is one of the richest districts in the world for her mineral and forest resources. The railways have played a very important part in opening up the district and from time to time new sections have been opened since 1890. The history of the railways in Singhbhum district could be given in the form of a chart as follows :—

I. HISTORY OF THE RAILWAY IN SINGHBHUM DISTRICT.

Section	*Date of opening.*
(*a*) Chakulia-Sini	1st June 1898
(*b*) Sini-Chakradharpur ..	22nd January 1890
(*c*) Chakradharpur-Goilkera ..	15th May 1890
(*d*) Goilkera-Jaraikela	1st February 1891
(*e*) Manikui-Sini	22nd January 1890
(*f*) Kandra-Gamharia Chord ..	2nd December 1919
(*g*) Tatanagar-Bahalda Road ..	1st February 1911
(*h*) Rajkharsawan-Dangoposi ..	17th January 1924
(*i*) Dangoposi-Gua	20th February 1925
(*j*) Barabil Branch	16th February 1926
Double Line	
(*k*) Sini-Chakradharpur ..	25th January 1924
(*l*) Chakradharpur-Goilkera ..	28th May 1925
(*m*) Goilkera-Manoharpur ..	24th December 1929
(*n*) Chakulia-Kakapara ..	16th December 1945
(*o*) Sini-Gamharia	23rd Febrary 1956
(*p*) Tata-Asanboni	18th December 1953
(*q*) Manikui-Kandra	18th November 1924
(*r*) Gamharia-Kharkai Bridge ..	11th September 1923
(*s*) Kharkai Bridge-Tata ..	14th June 1932

II. ROUTE MILEAGE .. .. 233.847 miles.

TRACK ... .. 439.100 miles.

III. HOWRAH-NAGPUR MAIN LINE (CHAKULIA TO MANOHARPUR).

Principal Sections.

(*a*) Rajkharsawan-Gua Branch.

(*b*) Portion of Barabil Branch.

(*c*) Portion of Tata-Onla-Jori Branch.

(*d*) Manikui-Sini of Purulia-Sini Section.

(*e*) Kandra-Gamharia Chord.

There had been further extension of 10 miles in the Adra-Chakradharpur section (Broad Gauge) with the transfer of the Chandil police-station of the former Manbhum district to Singhbhum district in 1956. Nine stations of this section such as Chakradharpur, Bara Bambo, Rajkharsawan, Mahali Marup, Sini, Kandra, Manikui, Chandil and Nimdih are in this district. Forty-four miles in Adra-Chakradharpur section fall within the district.

The statistics of traffic in goods and passengers and earnings therefrom at stations in Singhbhum district for 1955-56 are given in the appendix to this chapter. The type of goods traffic handled both outwards and inwards with the sections of the main stations for import and export have been shown in the appendix.

The Howrah-Nagpur Main line of the South-Eastern Railway (Old Bengal Nagpur Railway) traverses this district from east to west for about 118 miles. Two branch line sections, viz., Tatanagar-Gorumahisani-Badampahar and Rajkharsawan-Gua traverse the southern fringe of the district. They connect the iron and manganese-ore area situated at Gorumahisani, Badampahar, in Mayurbhanj district of Orissa and Noamundi, Barajamda and Gua situated in this district. The quarries of most of the iron and manganese-ore railed from Noamundi, Barajamda and Gua are *also* situated in Singhbhum.

Sini is a junction for a branch line running north-west to Purulia and Asansol connecting Jharia (in the State of Bihar), Sanctoria and Raniganj coalfields (in the State of West Bengal). There is an Engineering Workshop and a Staff Training School. The following sections have double line tracks :—

(*i*) Kakapara-Chakulia.

(*ii*) Tatanagar-Gamharia.

(*iii*) Sini-Manoharpur.

The district is abounding in forest and minerals and this is reflected in the traffic carried from stations situated in the district.

The more important stations despatching timber and sleepers are Manoharpur, Goilkera, Sonua, Kendposi and Barajamda. Minerals are despatched from Manoharpur, Noamundi, Barajamda and Gua, gravels from Dhalbhumgarh and kyanite from Rajkharsawan, Ghatsila and Dhalbhumgarh.

Tatanagar is the most important station in this district with a population of about 8,000 railway employees and the railway settlement consists of 1,200 quarters.

The following facilities have also been provided for the amenities of the staff at the above station :—

(*i*) Two dispensaries.

(*ii*) One institute.

(*iii*) One lower primary school.

The average daily number of inward and outward passengers at Tatanagar railway station is 2,030 and 2,900 respectively. Waiting halls, covered sheds, refreshment rooms and other amenities have also been provided for the passengers.

Tatanagar railway station serves the flourishing industrial area of Jamshedpur. The railway station has got proper arrangements for temporary rest and stay of the passengers. The station premises are being constantly enlarged and improved upon to meet the growing needs. On an average every day about 700 wagons of raw materials, viz., coal, iron-ore, limestone, manganese, etc., are received and about 150 wagons of finished products are despatched from this station.

The Indian Copper Corporation, Ltd. situated at Maubhandar is served by Ghatsila railway station. Its despatches of finished products, viz., yellow metal sheets, average to two wagons per day, while its intake of raw materials, such as coal and lime, average to 15 wagons per day. The Associated Cement Co., Ltd. situated at this district is served by Jhinkpani railway station. Its despatches of cement will average to 30 wagons per day, while its intake of raw materials, such as coal, etc., average to 20 wagons per day.

The more important stations for passenger traffic are Tatanagar, Chaibasa, Chakradharpur, Chakulia, Ghatsila, Rajkharsawan, Sini and Chandil. On an average 7,000 passengers are booked daily at stations situated on this district. Two City Booking Agencies have been opened at Tatanagar, one at Bistupur and the other at Sakchi. An average of 877 passengers are booked daily from these City Booking Agencies.

The district offices of the railway administration are situated at Chakradharpur. There is a railway settlement with 1,870

buildings for accommodation of the railway employees the population of which is 10,700.

The following facilities have also been provided for the amenities of the staff at Chakradharpur :—

(*i*) Two institutes—One is situated in the south-east and the other is situated in the south-west.

(*ii*) One Hindi, Telegu and Oriya lower primary school.

(*iia*) One Anglo-Indian primary school.

(*iii*) One Bengali middle school.

(*iv*) One high school.

(*v*) One railway dispensary with 6 beds.

(*vi*) An electrical power plant for supplying electricity to the station and railway colony.

(*vii*) A Station Committee has been constituted to look after the sanitary arrangement of settlements.

(*viii*) Drinking water is pumped from the river Sanjai, two miles away from the station.

(*ix*) There are two iron overhead water tanks which contain 1,39,200 gallons of unfiltered water and 6,400 gallons of filtered water respectively.

(*x*) There are bus services linking Chakradharpur to Chaibasa and Ranchi to Jamshedpur *via* Chakradharpur.

(*xi*) A District Board dak bungalow is situated at the south of the railway station while the forest dak bungalow is on the Ranchi Road less than half a mile to the west of the railway station.

(*xii*) A daily market is held every morning in the Railway Colony, while every Wednesday a large market is held in the town. This is well attended by the local people from the surrounding villages.

Expansion of Railway under First Five-Year Plan

The railway mileage of the district has been increased during the First Five-Year Plan due to her rich iron-ore which had to be supplied to Tata Iron and Steel Company, Jamshedpur and to Indian Iron and Steel Company, Burnpur, near Asansol in West Bengal, as the steel production of these two companies was to be increased by two million tons each during the first plan period. In addition, a new big steel plant is recently built at Durgapur in West Bengal which will also get its supplies of iron-ore from this district. Owing to the enormous increase of the traffic envisaged by the expansion of these two steel plants and the construction of the third plant in the neighbourhood, the railway line between Rajkharsawan and Barajamda was, therefore, doubled at a cost of about five crores of rupees.

The Noamundi-Banspani line has been constructed and opened to goods traffic only in May, 1958. This line is situated at a distance of 230.75 miles from Howrah on the Rajkharsawan-Gua branch of the South-Eastern Railway. This projected section traverses the district for about 5½ miles of the total 18 miles and then passes through Champua subdivision of the district of Keonjhar in Orissa.

The Noamundi-Banspani section has been constructed to open up the Joda Hill area where large deposits of iron and manganese ores are known to exist. The exploitation of the ores of this area will supplement the requirement of Tisco by 3.5 lakh tons per annum by 1958 in connection with the expansion programme of the works. At Joda a ferro-manganese plant has just been installed by the Tatas. The construction between Noamundi and Joda line has cost about two crores.* It is expected to be thrown open to passenger traffic soon and carries only goods traffic now.

In order to move efficiently the iron-ore to these three steel plants, it has become necessary to remodel the station yards of Rajkharsawan, Dangoposhi, Barajamda and Gua. After remodelling the capacity of these yards will be more than doubled. At Barajamda, the alignment on the Rajkharsawan side has to be changed to permit this remodelling. Further, a new alignment from Barajamda to Noamundi had to be found on an easier grade of 1 in 100 than the one existing from Barajamda which is now 1 in 80. Besides, Barajamda to Gua alignment had been regraded from 1 in 92 to 1 in 200 which involved lifting the existing track some 16 feet. This was done under traffic and had been completed.

A new alignment for down trains entering Rajkharsawan has been provided with a fly over bridge over the existing Rajkharsawan-Chakradharpur main line so that down trains from Barajamda-Rajkharsawan area would not interfere with the movement of main line trains.

The other important work is given below under tabular form:—

Track.

Length of doubling	..	..	60.54 miles.
Length of sidings	..	..	About 40 miles.
Rails ..	..	..	13,000 tons.
Fish plates	..	..	500 tons.
Fish Bolts and Nuts	..	..	100 tons.
C. I. Sleeper plates	..	..	4,00,000
Tie bars ..	..	..	2,00,000
Points and Crossings	..	..	260

* On 25th January, 1958, the first tap of ferro-manganese was made at Joda. It is a Rs. 175 lakh project. The new broad-gauge railway line from Dangoposhi to Banspani village near the plant site will facilitate transport of raw materials and the finished products (P. C. R. C.).

Earthwork.

Total quantity in banks about 6.7 crores cft.

Total quantity in cuttings 3.2 crores cft.

Staff quarters.

Type I	..	..	.. 400 Units
Type II	...	..	.. 165 ,,
Type III	...	..	.. 8 ,,

Bridges.

Minor	..	..	.. 193
Major	..	..	.. 6
Fly over	..	..	.. 1
Road over Bridges		..	.. 3

(Bridges having a total water way of 60 lineal feet of upwards or having a clear opening of 40 lineal feet or upwards in any one span, are classed as "Major Bridges". All others are classed as "minor".)

Materials used.

Bricks	..	..	.. 2 crores.
Stone (for Bridges)	..	..	12 lakhs cft.
Stone ballast	..	..	46 ,, ,,
Cement	..	..	.. 20,000 tons.
Lime	..	..	.. 300 wagon loads.
Gelatine for Blasting	..	..	40,000 lbs.
Detonators	..	..	.. 2,00,000 nos.
Safety Fuse	..	..	.. 2,97,600 cft.

A new Railway Yard has been set at Adityapur since 1956. The main function of this yard is to receive train-loads of raw materials such as iron ore, limestone and coal and to send them into the work site directly without taxing marshalling yard at Tatanagar. By avoiding the use of Tatanagar yard for these train-loads of raw materials the Railway is able to deal with heavy import of machineries and other materials in connection with the expansion of the Works.

Among the measures taken by the Railways to help the Steel Industry are quotation of low rates for the movement of raw products, liberal allowance of time for release of wagons, construction of special types of wagons for the movement of iron-ore, limestone. coal, benzol, benzene, tin bars and ingots.

POSTAL COMMUNICATION.

Post and Telegraph.

For postal administration this district is under the control of the Superintendent of Ranchi, Postal Division. The Head Post Office of the district is at Jamshedpur. Besides the chief receiving and disbursing office at Jamshedpur, the district has 107 sub and branch post offices spread over the district. In 1957 there were 580 miles of postal communication by road and train. There were 15 telegraph offices in the same year.

Money orders are issued in large numbers for Chapra, Siwan, Calcutta, Bombay, Coorg, Puri, Bhopal, Jabalpur, Nagpur, Sundargarh, Berhampur, Ganjam, Howrah, Trivandrum, Vishakhapatnam, etc. The chief places of money orders received from outside are Madras and Nagpur. Large payments are transmitted to Calcutta as most of the firms in Jamshedpur deal with Calcutta.

The following statistics since 1954 will be of interest:—

		1954-55	1955-56	1956-57
1.	Average weekly number of articles delivered.	2,11,893	2,20,312	2,67,171
2.	Value of money orders paid	Rs. 3,52,41,305.87	76,89,386.56	76,51,484.74
	Value of money orders issued	Rs. 1,63,33,393.69	76,03,812.12	71,21,462.43
3.	Number of Savings Bank Deposits.	35,891	38,950	42,380
	Value of Savings Bank Deposits.	Rs. 29,94,716.12	31,01,011.15	31,17,969.77
	Number of Savings Bank Withdrawals.	24,426	26,847	29,373
	Value of Savings Bank Withdrawals.	Rs. 1,10,89,022.61	21,46,533.30	49,19,629.30
4.	Number of Radio Licenses issued.	5,249	6,709	7,247
5.	Number of National Savings Certificates issued.	3,324	3,562	4,230
	Value of National Savings Certificates issued.	Rs. 25,54,220.00	55,53,680.00	65,19,695.00
	Number of National Savings Certificates discharged.	1,936	2,020	2,127
	Value of National Savings Certificates discharged.	Rs. 3,55,447.25	4,43,584.37	4,99,500.31

There have been remarkable changes in postal service in this district. There was a time in the early 19th century when there used to be some sort of separate postal services run by the zamindars and by the police thanas. When the Postal Department was created the zamindars and police were relieved of this part of their work. The service was maintained by postal runners. T e hilly country made the life of the runners hazardous and there were a large number of cases when the postal runners had fallen victims to the wild animals. Till only a decade back there was a network of runner service in the entire district barring Chaibasa, Chandil and Jamshedpur. The runners used to travel with mail from one stage to another and the sound of the jingling

of the bells attached to their spears was véry welcome to the countryside. They were slowly replaced by the mail motor service. The time is fast approaching when the runner service will be extinct. But it has to be remembered that the postal service was maintained for decades by the exemplary fortitude and hard labour of the runners who had risked their life in carrying the dak with only a spear through jungles and valleys.

Telephones.

There are 14 public call offices including 6 in Jamshedpur. There are, in addition, 17 Exchange System throughout the district, out of which 15 are located at Jamshedpur. Three of the Exchanges at Jamshedpur belong to Government while the Tata Iron and Steel Co., Ltd. runs and manages the 12 Exchanges of its own. The remaining two exchanges are at Chaibasa and Chakradharpur. The number of connections at Jamshedpur is about 2,600 and the average number of calls per day is 45,000. There are 117 connections at Chaibasa and 61 at Chakradharpur. A scheme for the management of the Exchanges of Jamshedpur by Government is under implementation.

Radio.

The radio now forms one of the chief means of communication for educating the general mass of the country. There were 7,247 radio sets in the district in 1956-57. The licenses for the use of radio sets in Singhbhum are issued by the local post office on behalf of the Government of India. The yearly license fee is Rs. 15 per set. The Government of Bihar had distributed several radio sets in the rural areas of the district for the benefit of rural population. Special rural programmes are broadcast from the Patna Station of All-India Radio. A Radio Station has been opened at Ranchi recently.

AVIATION.

There is a privately owned air field of the Tata Iron and Steel Company located immediately north-west of Jamshedpur. It has a fair-weather strip 1,280 × 57 yards. There is a Pilot Baloon Observatory of D type of the Meteorological Department.

The aerodrome is registered by the Director of Civil Aviation. Twenty-four hours notice is required to the Tata Iron and Steel Company for prior permission to land any private or public planes visiting Jamshedpur. Flying over iron works is prohibited. Re-fuelling on the aerodrome is available by prior arrangement. Telephone facilities also exist.

There are also small air strips at Jamodoba, Chaibasa and Noamundi but they are not meant for big planes. There is a large landing ground at Chakulia in Dhalbhum subdivision built during the emergency of the last great war, where different types of planes can land.

APPENDIX.

Statistics of traffic in Goods and Passengers and earnings therefrom at Stations in Singhbhum Civil District for 1955-56.

Stations.	Goods.		Earnings.	Passengers (Outwards)	Earnings.	Remarks. Type of goods traffic handled.	
	Outwards.	Inwards.					
1	2	3	4	5	6	7	8
	Mds.	Mds.	Rs.	Nos.	Rs.	*Outwards.*	*Inwards.*
1. Chakulia ..	2,91,422	4,03,806	2,97,083	142,423	1,88,501		
2. Dhalbhumgarh ..	27,59,168	46,339	56,543	67,604	53,399	Timber, Firewood, *Bidi* leaves Sand, China-clay, Charcoal, Stone, Oil-seeds, Railway Materials, Iron and Steel, Limestone, Kyanite, Iron-ore, Manures, Manganese-ore, Chemical Manures, etc.	Salt, Paddy, Rice, Gram and Pulses, Sugar, Cement, Coal, Petrol and K.Oil, Iron and Steel Oil-cake, Mohua flowers, Manganese-ore, Dolomite, Chrome-ore, etc.
3. Ghatsila ..	4,51,378	1,86,980	98,926	135,546	1,44,260		
4. Galudih ..	19,538	27,357	18,755	68,315	37,973		
5. Rakha Mines	67,332	33,758	10,361	27,911	14,139		
6. Asanboni ..	593	10,741	5,665	42,368	18,227		
7. Tatanagar ..	2,88,09,238	13,28,60,997	34,50,906	743,474	18,62,724		
8. Halodpukur ..	7,34,553	1,52,736	83,646	24,362	18,558		
9. Gamharia ..	2,332	67,332	38,979	59,306	29,319	*Main Stations for Import and Export.*	
10. Kandra ..	3,65,887	13,38,942	2,11,341	47.259	33,926	Tatanagar, Noamundi, Bara Jamda, Manoharpur, Gua, Dhalbhumgarh, Kandra, Chakradharpur, Ghatsila, Sini, Rajkharsawan, Dangoposhi, Chaibasa, Kendposi, etc.	
11. Sini ..	2,21,943	3,43,575	82,548	93,480	82,670		
12. Mahalimarup ..	147	300	3,240	53,579	26,969		
13. Rajkharsawan	5,17,862	90,572	48,891	168,492	1,21,428		

1		2	3	4	5	5	7	8
		Mds.	Mds.	Rs.	Nos.	Rs.		
14	Barabambo ..	1,50,926	1,485	201	73,280	41,279		
15	Chakradharpur ..	3,92,504	8,72,447	9,25,807	351,398	4,85,885		
16	Lotapahar ..	493	3,200	1,337	37,451	15,456		
17	Sonua ..	1,74,431	48,117	34,556	77,072	45,170		
18	Gailkera ..	2,71,879	26,494	14,852	45,311	28,540		
19	Posoita ..	1,77,345	3,083	3,421	21,099	10,314		
20	Manoharpur .	1,19,76,805	4,65,999	1,80,634	86,763	79,653		
21	Pandrasali ..	.	3,455	1,907	35,473	16,218		
22	Chaibasa ..	5,17,006	8,54,061	6,30,050	143,448	2,06,216		
23	Jhinkpani ..	38,920	18,464	30,831	25,796	23,101		
24	Kendposi ..	9,07,111	1,67,707	1,27,866	25,206	21,169		
25	Maluka ..	38,999	2,436	4,074	31,228	23,881		
26	Dangoposhi ..	3,36,563	10,29,271	99,609	38,157	18,021		
27	Noamundi ..	2,65,42,372	4,18,620	3,47,633	34,999	30,322		
28	Gua ..	86,85,226	3,81,707	1,13,602	16,523	27,869		
29	Barajamda ..	2,55,40,962	3,84,713	3,95,522	43,827	70,821		

CHAPTER XII.

THE PEOPLE.

GROWTH OF POPULATION.

According to the census of 1951, the population of Singhbhum district is 14,80,816, out of which 7,52,424 are males and 7,28,392 are females. The incidence of growth of population according to the census from 1872 to 1951 is given below. There have been two accretions to the area of the district since 1951. In 1954, 39 villages from Tamar police-station of Ranchi district were transferred to the district of Singhbhum. In 1956, the areas of Chandil, Patamda and Ichagarh police-stations from the district of Manbhum were integrated to the Singhbhum district as a result of the recommendations of the States Reorganisation Commission.

The population of the transferred areas from Tamar thana in Ranchi district and the areas from Manbhum district according to 1951 census comes to 2,20,734 persons. It may also be mentioned here that in connection with an enormous expansion programme of the Tisco concern in Jamshedpur there has recently been an influx of an additional population consisting of several thousands.

Census year.	Population.	Percentage variation.
1872	3,18,180	–
1881	4,53,775	42.6
1891	5,45,488	20.0
1901	6,13,579	12.5
1911	6,94,394	13.2
1921	7,59,438	9.4
1931	9,29,802	22.4
1941	11,44,717	23.1
1951	14,80,816	29.4

From the above statistics it will be seen that there were conspicuous increases during the decades 1872—81, 1881—91 and from 1921 onwards.

The enumeration in the year 1872 was admittedly approximate. Singhbhum district had come under British rule only in the fourth decade of the 19th century and the conditions in 1872 could still be described as fluid. The circumstances were such that the census operations of 1872 could not but be approximate. The incompleteness of the census of 1872 is apparent because in the next

census of 1881 there was an increase of not less than 42.6 per cent, which cannot possibly be accounted for.

The real increase in the population had started taking place since the decade 1901—11. The increase was largely due to emigration from other districts within Bihar and from other provinces. Since then the district has been well connected with railways and there has been rapid industrial development in the current century. The Tatas had established their Steel Factory in the district in 1907 and other industrial concerns followed the suit of the Tatas in exploiting the mineral resources of the district. The intensive exploitation of the mineral resources had led to a rapid industrialisation of the district which is responsible for the incidence of increase in the population in the subsequent years and particularly from 1931 onwards. The integration of Seraikela and Kharsawan to this district in 1948 had also led to an increase in the population which was noticeable in 1951 census.

Density.

The density of the population of the district, according to 1951 census, is 331 persons per square mile. Taking into consideration the density of the population of the areas transferred in 1956 the density remains almost the same. In the last District Gazetteer of Singhbhum published in 1910 it was mentioned that barring Palamau district the district of Singhbhum with 158 persons per square mile was the most sparsely inhabited area in Bihar. With industrialisation the condition has changed. Considering that the forests and hills cover a large area of the district the present density of 331 persons per square mile is quite considerable. The density in Dhalbhum subdivision, where the industries are centred, is 528 persons per square mile and is the highest in the district. The two police-stations of Bistupur and Sakchi in the town of Jamshedpur have the highest density of population in Bihar, that is, 12,120 persons per square mile. The lowest density is in Manoharpur area where it declines to 107 persons per square mile.

Migration.

The incidence of emigration has a particular feature of the districts in Chotanagpur. Along with the men of the other districts of Chotanagpur the aboriginals of Singhbhum district also emigrate frequently. The emigration is of several types. In the cold weather the aboriginals emigrate for periodical employment. The emigration to the coalfields and to the tea gardens is of a more permanent nature. In the past whenever there has been scarcity the incidence of emigration has gone up.

According to the census of 1951, out of the total population of 14,80,816 in Singhbhum district (excluding the area incorporated in the district in 1954 and 1956) there was a population of 1,92,413

born outside Singhbhum and found within the district when the census operations took place. This population of 1,92,413 is distributed as follows according to their birth places :—

Patna Division	13,612
Tirhut Division	5,826
Bhagalpur Division	4,147
Chotanagpur Division (excluding Singhbhum)	23,307
States adjacent to Bihar	88,856
Other States in India	30,506
Countries in Asia other than India ..	25,898
Countries in Europe	150
Africa	25
America	86
Total	1,92,413

A SPECIAL FEATURE.

An exclusive feature of the population of this district is the presence of a very sizable cosmopolitan population in the urban areas. This is due to the rapid industrialisation of the district which has attracted skilled hands from various parts of the world. The technological experience of several nations has been made available to the industrial units in this region. Initially Jamshedpur had attracted experts from England and the United States of America but now there is a good sprinkling of Germans, Russians and other nationals who have come to Jamshedpur and some of the other countries in connection with the expansion of the industries. Apart from the presence of people from different parts of the world, Jamshedpur and some of the other industrial areas could well be described as a museum of the different areas in India. There is hardly any part of India from where men have not come to Jamshedpur to earn their bread. This unique cosmopolitan feature is a great social factor and it may be said that the different classes of people from different parts of India have been living peacefully. There is hardly any parochialism or communalism among them.

It may also be observed that the district occupies a very prominent position in India's steel and coal belt. With the passage of time the importance of Singhbhum district in this area is bound to increase. It has aptly been observed that this area from the banks of Damodar river in West Bengal which covers portions of West Bengal, South Bihar, Chotanagpur, Northern Orissa and portions of Madhya Pradesh is fast becoming the Ruhr of India. Practically all the basic minerals are found in

this area and with the expansion of communication, an improvement of technical skill and its availability, the area will be developed much more and this integrated industrial region will have a world importance. The cosmopolitan character of the urban population of Singhbhum is also expected to continue.

Displaced Persons.

The district has been facing the problem of rehabilitating the displaced persons since partition of India in 1947. The displaced persons are both from East and West Pakistan.

The first batch of displaced persons numbering 3,000 had arrived in the district from West Pakistan in the latter part of 1947 and were housed in the liquidated military camp at Chakulia Air Field where they were provided with free ration, clothes, medicine and other facilities. However, later on they were shifted to Jamshedpur and were housed in Air Raid Precaution and Military Hospital buildings at Bara and in the abandoned jail buildings at Ghagidih as the camp buildings at Chakulia were damaged by an unfortunate cyclone in May, 1948. Ration and cash doles were given to over 2,700 persons in the beginning which were gradually reduced with the progressive rehabilitation and were stopped totally to non-agriculturists in November, 1949. The agriculturists were dispersed to different rehabilitation centres in Gaya and Alwar in Rajasthan where culturable lands were arranged by the Government of India for their settlement.

The second batch numbering 1,170 arrived in the district from East Pakistan in May, 1950 and were housed in Jamshedpur in the same camps in which the refugees of West Pakistan were staying. 350 persons of the second batch were sent to Gaya camp after two weeks of their arrival. These persons were given cash doles, free ration, clothes, etc., in the beginning. The number of such dole receivers went on decreasing with progressive rehabilitation and stopped by May, 1951.

The third batch of East Pakistan refugees arrived in July, 1951 from Bihta camp and consisted of 420 persons. They are in a colony at Chakradharpur.

The fourth batch of displaced persons consisted of 318 persons and arrived here in November, 1952 from East Pakistan. They were given doles, free clothing, etc., up to April, 1953 when they were sent to Purnea district for rehabilitation according to the arrangement of the State Government and were given agricultural lands.Refugees in this batch were mainly agriculturists.

The fifth batch from East Pakistan came in March, 1957. They are agriculturists and are to be rehabilitated at village Tentuldanga about 2 miles from Ghatsila.

REHABILITATION.

An amount of Rs. 1,39,300 has been given to 278 displaced persons of the first batch for taking up some business. They have also been granted 205 licenses to start business in Jamshedpur. To remove the difficulties of shop buildings, the TISCO, at the instance of the Government, have constructed a refugee market consisting of 119 shop rooms. The market is situated at Sakchi Bazar in Jamshedpur.

An area of 20.21 acres has been taken from the TISCO in Jamshedpur on Golmuri Road. The area has been divided into three blocks, known as Punjabi Block, Sindhi Block and Bengali Block.

In the West Pakistan Colony 220 houses have been constructed. Liberal loans have been given for this purpose. Some of the families have also been able to build their homes with the amounts they received against their claims for properties left in West Pakistan.

The area has been provided with roads, drains, lavatories, bath platforms, underground sewers, water pipe, etc., by the Government at a cost of Rs. 59,682.

In settling the second batch of refugees which arrived in the district in May, 1950 an area of 3.49 acres has been set apart in a compact block in the camp on Golmuri Road. 100 houses have been constructed here by the refugees themselves with loans granted to them by the State Government. Altogether 100 families consisting of 496 persons have settled in these houses. The area has also been provided with sewers, water pipe, lavatories, bathing platforms, etc. The total expenditure on housing with ancillary services in this colony has been Rs. 1,40,233. 170 refugees of this batch have also been granted loan of a sum of Rs. 75,067 for various trades.

The third batch of refugees, which arrived in the district in July, 1951, have been permanently rehabilitated in a colony at Chakradharpur at a total cost of Rs. 1,58,542. This sum also includes the amount of business and maintenance loans advanced to them.

The fourth batch of refugees, which arrived in the district in November, 1952, were, as stated above, settled in Purnea district and no permanent provision for settlement had to be made for them in this district.

The fifth batch of refugees, which arrived in the district in March, 1957, are to be permanently rehabilitated in a rural colony at village Tentuldanga in an area of 143 acres which has been acquired specially for this purpose. Presently the State Government have sanctioned a sum of Rs. 1,11,930 to develop the colony. The scheme is under execution.

OCCUPATION.

In spite of the rapid industrialisation of the district, agriculture remains the most important occupation for the majority of the population. According to the census of 1951, out of the total population of 16,85,195 in the district (including the population of Chandil, Patamda and Ichagarh but excluding the population of the 39 villages of Tamar police-station transferred in 1954) 13,04,465 are employed in agriculture. Persons, who are earning their livelihood through production other than cultivation, commerce, transport or other services and miscellaneous sources, have been enumerated at 3,80,730 and the ratio is of 4 : 1.

Under the category of "cultivators of land wholly or mainly owned and their dependants" there are 5,47,993 males and 5,54,621 females. In the Sadar subdivision the number of such cultivators is 2,44,905 males and 2,53,179 females. In Dhalbhum subdivision their number is 1,68,886 males and 1,64,345 females. In Seraikela subdivision the number is 1,34,202 and 1,36,997, respectively.

The corresponding figures under the category "the number of cultivators of land wholly or mainly unowned and their dependants" in the district are 18,460 males and 18,283 females. These figures for Sadar subdivision are 4,079 males and 4,597 females, for Dhalbhum subdivision 8,036 males and 7,112 females and for Seraikela subdivision 6,345 males and 6,574 females.

The "cultivating labourers and their dependants" in this district number 77,451 males and 81,827 females. This category refers to the landless labourers who depend on their work in others' fields for their livelihood. The break-up figures are for Sadar subdivision 30,291 males and 34,688 females, Dhalbhum subdivision 32,679 males and 32,479 females and Seraikela subdivision 14,481 males and 14,660 females.

The "non-cultivating owners of land, agricultural rent-receivers and their dependants" number 2,791 males and 3,039 females in the district. Their strength in the subdivisions is 887 males and 1,227 females in Sadar, 1,272 males and 1,106 females in Dhalbhum and 632 males and 706 females in Seraikela.

The number of persons engaged in non-agricultural occupation is as follows :—

	Males.	Females.
In production other than cultivation ..	1,25,389	1,03,300
In Commerce	25,608	20,607
In Transport	10,549	7,587
In other services and miscellaneous sources	47,081	40,359

The figures will indicate that in the field of agriculture females exceed males but in industries the case is just the reverse. This shows that the bulk of the industrial population who have immigrated into the district do not live with their family. Further a considerable number of the local inhabitants who have been drawn to the factory area have apparently left their female folk in their native villages.

Towns and Villages.

Considering that the last District Gazetteer of Singhbhum was published in 1910 it should not cause surprise that there is no mention of Jamshedpur since the inception of the Steel Factory of the Tatas took place at village Sakchi in 1907. The rapid growth of the area has resulted in the great steel city now known as Jamshedpur in honour of the late Sir Jamshedji Tata of the house of the Tatas. The only urban area that was mentioned in the last District Gazetteer was Chaibasa. A number of other towns have grown since. They are Chakradharpur, Noamundi, Musabani, Seraikela, Manoharpur, Gua, Maubhandar and Kharsawan. All these towns are connected with trade and commerce for the exploitation of the mineral resources. Some of them are important from railway point of view and the incidence of export and import through them is considerable.

The bulk of the population, however, still remains rural. The rural population of the district, including Chandil, Patamda and Ichagarh police-stations, consists of 13,96,278 persons, out of which 6,96,066 are males and 7,00,212 females. There are 4,195 villages in Singhbhum district. After agriculture, the cottage industries form the main occupation of the rural population.

According to the census of 1951, the urban population of the district is 2,88,917, out of which 1,59,256 are males and 1,29,661 females. It may be mentioned here that the transferred areas either from Tamar thana in Ranchi district or from Manbhum district do not contain any urban area excepting Chandil which may be described as a township. Besides heavy industries, the other occupations for urban population are *biri* making, manufacture of soaps, carpentry, bakery, motor transport business, etc. The ratio of the urban population to the rural population according to the census of 1951 works out approximately at 1 : 4.

The towns and villages with less than 2,000 population are 4,185 while the towns and villages with a population between 2,000 and 10,000 are 17. There are only three towns with a population of 10,000 and above, namely, Jamshedpur (2,18,162), Chakradharpur (19,948) and Chaibasa (16,474).

Jamshedpur.

The growth of population in the town of Jamshedpur has been phenomenal as will be apparent from the figures quoted below :—

Year.	Population.
1911	5,672
1921	57,360
1931	92,459
1941	1,65,395
1951	2,18,162

A large number of other allied industries, besides the Steel Factory of Tatas, have grown in Jamshedpur and each one of them maintains a large labour population in addition to the supervisory staff. To cater to the needs of the population schools, colleges, hospitals, shopping centres, etc., have developed. Jamshedpur has been given an exclusive chapter in this book.

Chakradharpur.

The exploitation of the mineral resources and the development of trade and commerce have led to a large turnover of goods in certain railway stations. In the list of towns in the census of 1911 Chakradharpur does not find a place. But in 1921 Chakradharpur had already become an important railway and commercial centre with a population of 10,093 persons. The population has steadily grown and was recorded as 11,191 in 1931, 14,807 in 1941 and 19,048 in 1951. It is a big centre for trade in *biri*, timber and transport. It is the headquarters of a railway division.

Chaibasa.

Chaibasa is the headquarters of the district administration. The population of Chaibasa in 1868-69 was 3,123 as mentioned in the Statistics of the Lower Provinces of Bengal, 1868-69 published in 1872. The population as recorded in the different censuses since 1872 is given below :—

Census year.	Population.
1872	4,641
1881	6,006
1891	6,850
1901	8,653
1911	9,009
1921	9,178
1931	10,785
1941	13,052
1951	16,474

Chaibasa has no industry of importance in the town itself. Besides this, the rapid growth of Jamshedpur at a distance of a few miles has affected the growth of Chaibasa. Although Chaibasa is the headquarters of the district, it still retains the rural characteristics and differs materially from Jamshedpur which is the headquarters of a subdivision only.

Noamundi.

Noamundi was a small village before. But in 1941 it had already grown into a township with a population of 6,389 persons. In 1951 census the population had gone up to 7,227 with 3,869 males and 3,358 females. The township has grown because of the exploitation of the iron-ore at Noamundi by the Tatas.

Musabani.

Musabani has had a decline in the population. In the 1951 census the population was 5,220 as against 8,270 in 1941.

Manoharpur.

In spite of a high incidence of malaria, Manoharpur continues to be the centre for timber trade. The population in 1951 was 4,734 as against 4,397 in 1941.

Gua.

Gua has developed because of the activities of the Indian Iron and Steel Company exploiting iron-ore in the area for feeding the steel plant at Burnpur in West Bengal. In the 1951 census Gua recorded a population of 4,726 persons.

Seraikela and other townships.

Seraikela is the headquarters of the subdivision bearing the same name. It had a population of 6,105 in 1941 census which went down to 4,777 in 1951. Maubhandar was reported to have a population of 4,211 in 1951. Kharsawan which integrated to Singhbhum district in 1948 has a population of 3,438 souls. The small township of Chandil is at the centre of a vegetable producing belt. Lac business is also carried on here on an extensive scale. Chandil is a railway junction.

LANGUAGE*.

The languages in Singhbhum mostly come from three distinct stocks. One is the Munda family of languages which includes Ho, Mundari, Santhali, Mahili, Bhumij and Kharia. The other is the Dravidian family of languages which includes Oraon, Telugu, Tamil and Gondi. The rest are of the Indo-Aryan stock which includes Hindi, Urdu, Bengali, Oriya, Gujrati, Nepali, Marwari, Punjabi, etc. On account of the cosmopolitan character of the

* The statistics given under this head do not include the statistics for the newly transferred territories in 1954 and 1956.

urban population of Jamshedpur and the other industrial concerns distributed over the district there is a sprinkling of people speaking some of the European languages. The following table will show the strength of the people speaking different languages :—

	Males.	Females.	Total.
Indo-Aryan Languages.			
Oriya	1,50,564	1,47,065	2,97,629
Bengali	1,38,454	1,30,331	2,68,785
Hindi*	1,13,171	99,498	2,12,669
Gujrati	2,249	1,886	4,135
Nepali	2,835	992	3,827
Marwari	1,749	1,370	3,119
Punjabi	9,816	7,205	17,021
Other Indo-Aryan languages	1,104	729	1,833
Munda Languages.			
Ho	2,02,616	2,11,087	4,13,703
Santhali	73,525	77,159	1,50,684
Mundari	33,544	30,700	64,244
Mahali	1,040	1,472	2,512
Bhumij	464	458	922
Kharia	17	27	44
Dravidian Languages.			
Telugu	8,074	6,721	14,795
Oraon	6,741	6,011	12,752
Tamil	2,677	2,170	4,847
Gondi	1,447	1,872	3,319
Other Dravidian languages..	840	398	1,238
Other Languages of India.			
Pushtu	575	520	1,095
Malar	16	3	19
Miscellaneous	235	179	414
Other Asiatic Languages ..	109	15	124
European Languages.			
English	549	515	1,064
Other European Languages..	13	9	22

* Number of Urdu speakers totalling 28,550 has been included in the number of Hindi speakers.

EIGION*.

Next to Hindus, the majority of the population in the district of Singhbhum from religion point of view belong to Tribal religions, a number of which have been returned. The names of the Tribal religions returned in this district are Adibasi, Santhali, Mundari, Sarna, Ho, Karmali, Singbonga, Jahira, Kol, Mahili, Kharwar, Gond and Marang Buru. The police-stations of Chandil, Ichagarh and Patamda, which have been incorporated into this district according to States Reorganisation Commission's recommendations of 1956, do not have much Adibasi population. These names have a certain laxity about them and have followed the particular name of the tribals at places and the terms Singbonga, Jahira and Sarna represent the beliefs of the Adibasis. A more detailed note about the religion of the Adibasis and the population of the different tribals in the district will be found in the chapter on the Adibasis.

Certain vague and unclassifiable entries have been returned as religions from the non-tribals of Singhbhum district, such as *Alakh, Sanatan, Sakhi Sampradaya, Radheshyam Panthi, Shaivya, Muni Samaj, Satya Narain Dharam, Sadhu Dharam*, etc. The adherents of these beliefs are very small in number. There are 341 Brahmos returned in the district most of whom are confined to Jamshedpur.

So far as the more commonly recognised religions are concerned, their adherents in the district have been returned as follows in the census of 1951 :—

	Males.	Females.
1. Hindus	4,79,523	4,47,436
2. Jains	261	171
3. Sikhs	7,551	6,847
4. Buddhists	167	110
5. Zoroastrians	223	172
6. Muslims	31,724	23,964
7. Christians	15,410	14,427
8. Jews	5	..

The total population of Tribal males under other religions is 2,15,334 while that of females is 2,35,232. The total male population under "Other Religions"—non-tribal is 2,226 while the total female population is 33.

* The figures mentioned under this sub-head do not include the figures for the newly integrated territories in 1954 and 1956.

Hindus.

The Hindus, with an aggregate of 9,26,959 represent about 63 per cent of the population. Hindus are fairly well scattered all through the district. They predominate in portions of Sadar subdivision.

Muslims.

Muhammadans number only 55,688 and form nearly 4 per cent of the population. There has been a very big increase in the number of Muhammadans since 1910 when their population was 5,373 as quoted in the last District Gazetteer of Singhbhum (1910).

Christians.

In 1901, the Christian population was 6,961, of which 6,618 were Indian Christians. The converts mainly came from Mundas, Hos, Oraons and some backward communities among the Hindus. In 1931 census, the Christian population was 19,552. The Christian population in 1931 in Seraikela and Kharsawan was 311 and 53, respectively. In 1941 census, the Christian population in Singhbhum district was 6,411 and in Seraikela and Kharsawan 31 and 12, respectively Seraikela and Kharsawan were integrated to Bihar in 1948.

The Christian population, according to 1951 census, in Singhbhum district inclusive of Seraikela and Kharsawan is 29,837, out of which 390 are Anglo-Indians A survey of these figures shows a very great drop in Christian population in 1941. Although there may have been emigration and recruitment in the Second Great World War, however this big drop is not fully explained. It has to be remembered that the census operations in 1941 were very much curtailed owing to war-time emergency and there was not much of field scrutiny and the figure appears incorrect so far as the Christians are concerned.

The Missions working for the propagation of the Christian faith in Singhbhum district are the German Evangelic Mission, Lutheran Mission, the Society for the Propagation of the Gospel and a Roman Catholic Mission. The Lutheran Mission was established in Chaibasa in 1864 and had its centres at Takad in Bandgaon, in Tujuar, in Porahat and Chakradharpur. The Roman Catholic Mission started its work at Chaibasa in 1868 and has its branches at Bandgaon and Anandpur. The Society for the Propagation of the Gospel also started their work from Chaibasa in 1869 and had a few out-stations. The Missions maintained some schools and dispensaries.

It is a fact that although the Christian Missionaries were very successful in making converts among the tribals in the other districts of Chotanagpur, they did not meet with that degree of

success as in Ranchi. One of the reasons is that the *mankis* and *mundas* had tremendous influence in the Ho community and they did not help the early Christian pioneers. Without their help it was difficult to make much headway among the aboriginals. Conversion of a *manki*, whenever it has taken place, gave a passport to the Missions.

Other Castes.

The other castes among the Hindus that require some mention are the Goalas, Tantis, Bhuiyas, Kurmis and Kamars. In 1951 census there has been no caste-wise enumeration. It is not possible to collect the present numerical strength of these castes. These caste men have now penetrated almost every village including the predominantly Ho villages. The Bhuiyas require particular mention as they appear to be one of the oldest inhabitants of Singhbhum. It is said that being oppressed by the Hos, they requested for the help of three Rajput soldiers of Man Singh who subdued the Hos and called the country conquered. The name Porahat takes after the Goddess Pauri who was the Goddess of the Bhuiyas. The Raja of Porahat used to get his investiture through a Bhuiya who would offer *tilak* to him.

*Scheduled Castes and Scheduled Tribes.**

According to the census of 1951, the population of the Scheduled Castes and the Scheduled Tribes is 49,768 and 7,13,522 persons, respectively, out of which Scheduled Castes are 31,086 males and 18,682 females and Scheduled Tribes are 3,47,313 males and 3,66,209 females. The number of females is very much less than the number of males in the Scheduled Castes, whereas the number of females is higher in the case of Scheduled Tribes. The total number of rural and urban population of the Scheduled Tribes and the Scheduled Castes is as follows :—

	Rural.			Urban.		
	Males.	Females.	Total.	Males.	Females.	Total.
1	2	3	4	5	6	7
Scheduled Castes ..	25,323	13,023	38,346	5,763	5,659	11,422
Scheduled Tribes ..	3,37,003	3,54,088	6,91,091	10,310	12,121	22,431

The Scheduled Tribes are distributed throughout the district but are primarily rural in character. They have not yet taken to urban life and only big industrial towns have been able to attract them where they go in search of work. They form 80 per cent of the population in Sadar subdivision but are less than

*The statistics mentioned under this sub-head do not include the statistics for the newly integrated territories in 1954 and 1956.

even 40 per cent in Dhalbhum subdivision which is more urbanised. In Seraikela subdivision the Scheduled Tribes constitute more than 50 per cent of the population.

SEX AND MARRIAGE.*

This district has the peculiar feature of a slow change in the ratio of female population to male population. According to the census tables of 1901 and 1911, there were 1,029 and 1,035 females, respectively to every 1,000 males. This ratio was, however, reversed after 1911 and in 1921 we find that there were 998 females per 1,000 males. In 1931 there was a further drop and there were 989 females per 1,000 males. This drop in the ratio of females to males has continued and we find that in 1941 there were 967 females per 1,000 males and in 1951 there were 968 females per 1,000 males.

These figures will indicate that the mining and manufacturing industries in the district have attracted a large male population who do not live with their families.

From the census tables of 1951 it appears that there are 6,213 unmarried males and 3,110 unmarried females between the ages 15 to 24 as against 6,241 married males and 8,631 married females. In the age-group 25 to 34 there are 1,951 unmarried males and 1,006 unmarried females as against 10,287 married males and 9,641 married females. This big figure of unmarried population in the age-group 15 to 24, which is the popular age-group for the performance of marriage, could be partially explained by the high bride prices and also because a big percentage of unmarried males who have come to the district for their living and they do not probably get suitable brides of their castes and community within the district.

FOOD AND DRESS.

Regarding the food, habits, dress and ornaments, etc., of the Adibasis, mention has been made in a separate chapter on the Adibasis. The majority of the non-Adibasi people use *dhoti* and *kurta* or shirt as their main wear. The people who are engaged in agricultural work do not use shirt or any underwear as *ganji* unless they are attending a ceremonial occasion or a *mela*. The poorer section, due to lack of purchasing power, cover themselves with a piece of cloth measuring about 2 to 3 yards. The females use *sari*, either coarse or of the better variety, according to their financial status. An upper wear for the females, namely, *jhula*, *kurta* or blouse is becoming common. Use of trousers, half-pants and shirts for the men is gaining popularity. The people working in the factories or at the other industrial centres are in the habit of using *dungries* or blue pants. The upper class people wear

* The statistics mentioned under this sub-head do not take into consideration the territories recently integrated to the district in 1954 and 1956.

shirts, coat, *ganji*, *dhoti*, trousers or suits. Head-wear is not common. On ceremonial occasions the people change into more elaborate and showy dress. A huge quantity of washing soap is sold on every *hat* day at Chaibasa and in the other markets. The people of Singhbhum, both Adibasi and non-Adibasi, usually wear clean clothes.

Rice is the principal food. Use of vegetable and *dal* is not common, mainly among Adibasis where *sag* takes the place of *dal* and is the principal vegetable. Wheat is also used but not popularly. A favourite food of the Oriya population is rice mixed with water. This is known as *pakhal* to which salt is added to taste. *Murhi* or fried rice forms the common item of tiffin. In the growing towns, such as Ghatsila, Chakulia, Baharagora, etc., fried *pakoras* (snacks) together with tea is common for tiffin. Tea is becoming common among the heavy workers and the middle class people. A section of the non-Adibasis also like *handia* or *diang* which is a popular drink of the Adibasis. *Choora* and *dahi* (curd) are not the common food of the people in this district as they are in most of the other districts of Bihar. Chewing of betel is very common, specially among the Oriya community. Smoking *biris* and cheap cigarettes is also common among the workers in the factories. There is a huge sale of them in Jamshedpur and other towns. The use of good quality cigarettes and cigars is confined to the urban areas and to men of higher income-group.

The backward sections of the Hindus follow almost the same food habits as the aboriginals but there is a tendency among the Backward Hindus now to give up rice beer (*handia* or *diang*).

Meat and fish are also common food for those who can afford. Fish is rather costly in Singhbhum district in comparison to the neighbouring districts. Poultry and eggs are also in use but the supply is restricted. Dried fish is relished by some sections along with the Adibasis to whom it is a delicacy. The taste for dried fish is indigenous to the district and obviously the taste has come from Orissa where dried fish is commonly taken. The road to Jagannath (Puri) has brought about a common pattern in many ways.

Achar (pickles) is not so much used by the people of this district excepting a few. Milk, curd, butter and *ghee* are not commonly used. Peculiarly enough, the Adibasis are rather allergic to milk and milk-products, although they keep cows.

The cooking vessels used by the common man in the country-side are made of earth. Metallic vessels are used by men of higher income-group.

CUSTOM.

In the Chapter for the Adibasis mention has been made of some of their customs. The life of an average Hindu householder is fettered with a large number of customs, many of which are,

however, slowly liquidating themselves. There are customs regulating the daily life from conception to cremation or burial. There are taboos which an expectant mother has to follow. There are particular customs that are rigidly implemented in order to have a safe delivery. Even to this day the witch doctor and the *chamain*, the village midwife, who still follows her old methods, have their hold. If there is a complication during the time of delivery, a priest or *ojha* or a witch-doctor is called to drive away the evil spirit, which is taken to have caused the complication. After delivery in the average orthodox families the mother is considered unclean for ten days and no one except the midwife normally touches her. A *Sasthi* ceremony is observed on the sixth day after the birth when a feast is given to the relations and friends and after that the normal life of the mother is resumed. Usually on the 12th day a *namkaran* ceremony is held when the name of the child is given.

There are specified customs or *sanskars* for the other important events, namely, *mundan*, a ritualistic ceremony of giving the boy the sacred thread, marriage, funeral and *sradh*.

Ornaments.

Ornaments for males.

There have been significant changes in the use of ornaments for both men and women.

Fifty years back almost every well-to-do male in this district used to wear ornaments exclusive to them. Male ornaments were not confined to childhood or youth alone. The landed aristocracy irrespective of age loved to wear ornaments.

For the arm.—Different variations of *chaukatha* were known for the boys and men. *Bank* was a solid piece of silver or gold which was twisted to adorn the arms. *Bank* was, however, worn singly and on the right upper arm only. Various kinds of amulets put either in hollow, cylindrical or flattened pieces of gold or silver were worn and known as *tabiz*. *Anant* which is still in vogue for the women-folk only was also worn by the males for the arms.

For the neck.—A common neck ornament for males, men and boys was *rudrachh*, made of the seeds of *rudrachh* (Eleocarpus ganitrus). *Kantha* was another rough and ready kind of gold or silver piece twisted for the neck and often sacred relics attached to it. A necklace of corals known as *mungwa* was a particular favourite with the landed aristocracy. The name is derived from *mungwa*, the vernacular for corals. For all ages of a man *mohar malas* were much prized for the neck. It was a string of *mohars* or gold coins. Twisted gold wire known as *gop* or *ghunsi* was used for the neck by the middle class males. A long gold or silver chain often with filigree work for the neck was known as *sikri*.

A gold or silver wrist-watch is now probably the only visible ornament on a male body. Wrist ornaments of gold or silver like *bala* or *balea* or *pahunchi* or *kara* or *bera* or *mathiya* or *tora* which were different variation of bracelets used to be worn by boys and men. Amulets in gold or silver case are still worn on the arms or the wrists as before.

For the waist.—Long chain of gold or silver hung round the waist and was known as *harhara* or *kardhani*. Bejewelled belts of silver or gold known as *langra* or *jawa* also adorned the waist of the richer males. The clasp of such waist ornaments was known as *jai*. All these have completely disappeared now.

For the feet.—The anklets for the boys were known as *garanw*. Boys used to wear *ghunghru* fitted with bells or *chaurasi* when it carried 84 beads. Various kinds of toe-rings also of metal other than gold were used and known as *anguthas*. Adult males in the past did not have much use for ornaments for the feet. Gold was never used for ornaments for the feet as Lakshmi, goddess of wealth, cannot be touched by the feet.

Ornaments for the women.—The incidence of casualty has been much less in the case of ornaments for the women. Rather some of the ornaments that had died out or had declined are slowly coming back again. The *bunni* or *mangtika*, an ornament tied on the centre of the forehead by three strings, one passing round each side and the other over the top of the head did have bad times but they are coming back again in a more modern style. *Mukut* for the head has come back for the richer class in the last one decade. The spangles or wafers gummed on to the forehead known as *tikulis* are now in use again in a smaller size and known as *bindis*. The lengthy nose chain of gold known as *nakchanda* or *chhuchhi* has now been replaced by small nose pins. The nose ornament known as *nathiya* which are circlets of gold are more or less confined to the young boys and girls. A few other typical nose ornaments of rough kind like *bulak* or *besar* which were rings or flattened pieces of ornaments hung from the centre cartilage of the nose that had gone out of fashion are coming back in a smaller and more modern style. *Jhulni*, a nose-ring with beads, which used to swing backwards and forwards have staged a come-back without the beads.

Ear ornaments.—Elaborate ear-studs like *jhimjhimiya* which were long flat pendents or the *machheya* long pendents like fish have gone out of use unlike the smaller ear ornaments like *kanphul* or *balis* which are ringlets still worn on the ear. The class of heavy ear ornaments of the type of *sikri* for the ear which needed a chain passing round the ear to support are not favoured now.

Ornaments for the neck.—The neck is the most favoured part of the body in female physiognomy for the wearing of ornaments. Here also the casualties are the more elaborate ones. *Humel*, a necklace fitted with bells has gone out. An ornament for the neck, a set of three chains of different lengths, known as *telri* or of five chains, known as *pachlari* or of seven chains, *satlari*, has declined due to economic deterioration. *Baddhi*, a long gold or silver chain crossing the chest and going behind round the body has also become obsolete for similar reasons. The upper class women no longer wear *hansuli*, the solid gold or silver necklace open in the back. *Hailak*, a long necklace composed of flat pieces, generally nine in number, is a back-number now. The second wife had to wear an ornament made to commemorate the first wife and this was known as *sautin*. On the first occasion when the second wife applied sindur (vermilion) to her hair, she had to put some *sindur* on that *sautin* ornament. The modern second wife does not encourage the memory of her predecessor and so *sautin*, which was absolutely an essential ornament before, is going out.

Ornaments for the arm.—The casualties in the older set of arm ornaments have not been so severe. *Jhabiya*, a kind of inverted cup hanging from a gold or silver chain or a piece of thread to which bells are attached, has been modernised. The bells or *ghundis* have been taken out from *Jhabiya Bijautha*, which consists of five pieces strung together, and was a favourite arm ornament, has gone out of use.

For the wrist.—The wrist ornaments like *kangna* or *khasiya* have been modernised. The present day wrist ornaments, *churs* or *churis*, are simpler but more stylistic and an improvement to the more elaborate ones like *banguri* which had hanging attachments to them.

Finger ornaments—The finger of the woman has no longer the ring with a small mirror attached to it, commonly known as *arsi*. There has not been much of change in the finger ornaments.

For the waist.—Most of waist ornaments or belts like *kardhani* or *kamarkas* or *jhabba* are not in use any longer. *Kamarbands* are, however, still presented as a marriage gift but seldom used afterwards.

For the feet.—*Pawnjeb*, an ornament fitting on the ankle and covering and fitting on to the upper part of the foot has also gone out. *Painjni*, anklets with bells, *kinkinis* with small bell attachments (*ghughuru*) are no longer in use by adult women. But in the rich families *pawnjebs* or *painjnis* are still given as a part of marriage gift.

On the toes various types of ring, usually of silver, known as *anguthas* and *chhallas*, are no longer in use. An ornament fitting over all the toes was known as *bichhiya*. This is also a casualty now among adult females.

Ingredients for ornaments.—There has not been much of change in the metals that were largely used in the past. Bronze, copper, silver, gold, jewels and the nine *ratnas* consisting of *Mukta, Manikya, Vaiduria, Gomeda, Bajra, Vidruma. Padmarag, Markata* and *Nilam,* are still used. Imitation jewels, inferior pastes, lac and brass, are used for making cheaper ornaments. The changes in the habit of wearing ornaments show how tradition is melting at the touch of modernism, particularly encouraged by different kinds of people staying in this district now.

FESTIVALS.

The usual festivals of Bihar are followed in this district by the Hindus and the Muslims. This district has the feature of a large number of *melas* that have grown out of the observance of particular festivals or *pujas*. There is a description of the principal *melas* in the chapter on the Directory. Some of the festivals are connected with the agricultural operations. *Bana puja,* performed in early May or on *Shukla tritiya* day, is an important festival in Seraikela subdivision. The *puja* is performed somewhere near the fields and the village deity is worshipped and invoked for good crop. Goats or chickens are sacrificed. *Asadri puja* is also observed by the cultivators in Seraikela subdivision which takes place before transplantation. A peculiar festival in that subdivision is *Rajaswala Sankranti.* This festival is observed by both Adibasis and non-Adibasis and on this day they do not plough the land as the earth is considered to be in her menses period. *Ratha Yatra, Gaham a Purnima, Janmastami, Ganesh puja, Mahalaya, Makar parab, Durga puja, Kali puja, Dewali, Rash Purnima, Shivaratri, Dolyatra,* are other popular festivals. On *Gohal puja* day, *gohal* or cattle-shed is cleaned and the cattle are worshipped by both Hindus and Adibasis. *Chait parab* is a great festival in Seraikela subdivision and the famous *chhau* dance is staged for four nights at Seraikela on this occasion. Another important festival is the *Mangala puja* which is celebrated on the occasion of the last Tuesday in *Chait.* The peculiarity of this *puja* lies in the fact that although it is held in the house of the Harijans even the high caste Hindus take part in it. This is the only occasion when the Harijans get a religious importance. *Id* and *Muharram* are the two most important festivals of the Muslims of the district.

PASTORAL SONGS.

They are sung by women while working in the field at the time of transplantation of paddy and at the time of harvesting. Unlike the other parts of Bihar, men-folk of Singhbhum district do not usually join in such songs, excepting in parts that touch the district of Manbhum. The theme of the songs relates generally to love or to some incident of the past. They are sweet and melodious.

Folk Literature and Songs.

The folk literature and songs among the Adibasis have been preserved from generation to generation by repetition even in the absence of the written script. The non-Adibasi folk literature and songs have been carried to Singhbhum either from other parts of Bihar or Orissa. Cinema songs have not gained that popularity which they have got in the other parts of Bihar. Cinema songs are confined to the towns and at the moment there is not much danger of the old folk songs being supplanted by the cinema songs.

Witch-craft.

Witch-craft among the Adibasis has naturally affected the various castes that live in the same village of the Adibasis. Non-Adibasis also report to the *sokhas* or witch-doctor for the cure of some illness, if any misfortune has to be avoided.

Daily Life.

Different income-groups of people in the urban areas have a somewhat different type of daily life But life in the rural areas is of more or less the same pattern for all classes. Generally the labourers as well as the middle class people, who have to work either in the field of others or in their own field rise early in the morning and take some food cooked over night which is called *pakhala* or *basia*. Among this section of people mid-day meal usually consists of cooked rice and spinach (*sag*) or some vegetables or *dal*. They come back home in the evening and after a wash take their principal meal and retire. This meal is also of the same type and is usually taken quite early and by 8 P. M. or so the family retires. The women-folk of the labourer also add to their family income by working in the house of some rich neighbour and they would keep themselves busy in doing household work, such as cooking, washing of clothes, looking after the children or doing a little marketing. Such women-folk may also have to scrape grass or pluck fruits or twigs for their cattle which is to be done in the day.

The labourer in the town goes to his morning work after taking tea and some food which depends on the financial condition of the family. If he is a mechanic, mason or a carpenter of a somewhat higher income-group he may have some *chapati* with vegetables or sweet and tea. His mid-day and night meals consist of rice or chapati, *dal* and vegetable and very occasionally meat or fish. Meat, fish or even *dal*, however, does not find place in the daily menu of an ordinary labourer in the town or in the village who earns Rs. 2 to Rs. 3 per day. The women-folk of the town labourer earn some money by washing utensils and helping in cooking in a rich family. They have started keeping

goats and poultry for supplementing their family income. Women-folk of some castes also have a small earning by hawking fruits and vegetables.

The life of the professional urban middle class consisting of lawyers, medical practitioners and service holders is somewhat different. Such persons after taking a very light breakfast in the morning take a heavy meal at about 10 A. M. and then go to their working places and remain there from 10 A. M. to 5 P. M. or later. Tea is becoming popular in the menu of such people. The quality of their food depends upon the financial condition of the family concerned. It is not usual for ordinary middle class family of lower income-group of this class to take fish, meat or egg every day. Fruits could only be taken occasionally. The men of the higher income-group, however, take meat or fish about twice or thrice a week. The size and the income of the family necessarily control the menu of the urban middle class

The second section of the middle class consists of traders and shop-keepers and the persons connected with business. Such persons usually have to be at their place of work from 8 A. M. to 8. P. M. They do not usually return home to take their mid-day meal unless they are comparatively richer and have a conveyance of their own. Here also the quality of the menu depends upon the size and income of the family.

It is to be noted that there is not much scope for amusement or entertainment in the daily life of an average middle class family. The leisure hours in the evening are usually spent in visiting friends or home-chats with the family and occasionally seeing a cinema or some shows that may be going on in the town. In the rural area a lot of time is wasted on village politics and gossips.

In the rural areas there is a section of the middle class people in every village who make a business out of visiting law Courts. Their assistance is sought by the simple villager who has some Court work. The number of such professional Court visitors or *pairbikars* in the country side is quite large and they are the usual link between the clients and law Courts.

The daily life of the people belonging to the more affluent class, who do not have to earn their living, whether in the urban or in the rural areas, revolves mostly in an idle circle, such as taking a heavy meal, long siesta, visiting friends, cinemas or football matches. With the abolition of zamindary, it is, however, expected that the daily life of such affluent people will have to change soon and they will soon merge into the class of upper middle class. Reading by the average educated man is confined to newspapers and light literature. Use of conveyance depends on financial status.

Ladies of a middle class family both in the rural and urban areas have got to do a lot of the household work out of love or necessity. It is difficult for a middle class family to indulge in a number of servants. The ladies have to look after their children, do the cooking, clean the house and in their leisure time they would probably do a little needle work or some embroidery work.

Washing is a common habit. The mouth is usually cleansed with twigs of *nim*, *karanj* and *chirchiri*, etc. The use of tooth paste and brush is confined to the richer and urban class of the people. Clay or soap is largely used for cleaning one's person. Washing of clothes is also a common practice in every household. Oil is usually used for the head or the body. The oils that are used are *mustard*, *coconut*, *nim*, *karanj*, *gulrogan*, *til* or some other oils. The use of mustard oil is taken against the catching of cold, and the use of *nim* and *karang* oil is popular among the Hos. Some orthodox people set apart some auspicious and inauspicious days for using and abstaining from using the oil. It is a very old habit among women to shampoo their hair with some sort of clay or curd mixed with oil.

CHAPTER XIII.

THE ADIBASIS.

The term Adibasis literally means 'Original settlers', 'earliest settlers' or '*autoch thones*'. Archæological evidences are numerous to indicate the existence of paleolithic culture in this area and it is doubtful whether we can ascribe it to any of the communities living within the bounds of the district at the present day. Attempts have been made to correlate the local neolithic finds to the ancestors of the Mundari group of tribes; but here, too, evidence is insufficient. It is known that from time to time various groups of people have come and settled in Singhbhum, among whom it is difficult to single out the first comers in the time-scale. So for our present purpose, we shall use the term Adibasi for those tribal communities who have been included in the list of Scheduled Tribes under the Constitution of India. In Singhbhum many of them like the Hos, the Bhumij, etc., have the tradition of being the first settlers in the district. They claim that they first cleared the jungles and thus established *khuntkatti* tenure rights. The general idea about the Adibasis is that they are a somewhat strange set of people living in the midst of the jungles completely isolated from the general Indian population. This picture is not correct, the Adibasis having long standing economic and cultural ties with their non-tribal neighbours.

DISTRIBUTION.

In 1951 census there was no separate enumeration for the different tribes living in the district. Unfortunately all the tribal communities have been lumped together, giving a total population of 7,13,522 in the total general population of the district. For getting a more detailed picture of the nature of population distribution of the different tribal communities one has to depend on the 1931 census table which is as follows:—

Hos.		Bhuiyas.		Santhals.	
Singhbhum ..	3,01,158	Singhbhum ..	18,273	Singhbhum ..	1,08,890
Kolhan ..	2,24,888	Seraikela and Kharsawan.	7,195	Ghatsila ..	1,03,023
Seraikela ..	25,963			Seraikela ..	30,006
Kharsawan ..	11,706			Kharsawan ..	1,214
Total ..	3,38,827	Total ..	25,468	Total ..	1,40,110

Oraons.		Bhumijs.		Kharias	
Singhbhum .	10,111	Singhbhum ..	53,058	Singhbhum ..	5,879
Seraikela ..	558	Ghatsila ..	47,794	Dhalbhum ..	5,456
Kharsawan .	551	Seraikela ..	11,390		
		Kharsawan ..	2,398		
Total .	11,220	Total ..	66,846	Total ..	5,879

Mundas.		Gonds		Bathudis.	
Singhbhum ..	50,963	Singhbhum .	7,026	Singhbhum ..	998
Chakradharpur	32,278	Sadar .	5,591		
Seraikela .	885				
Kharsawan .	5,602				
Total ..	57,450	Total ..	7,026	Total ..	998

Birhors.		Savars	
Singhbhum	12	Singhbhum .	762
		Dhalbhum	751
Total ..	12	Total ..	762

The following castes or groups of the Singhbhum district were notified as Scheduled Tribes under the Constitution of India, 1950:—

(1) Asur.
(2) Baiga.
(3) Bathudi.
(4) Bedia.
(5) Binjhia.
(6) Birhor.
(7) Birjia.
(8) Chero.
(9) Chik Baraik.
(10) Gond.
(11) Gorait.
(12) Ho.
(13) Karmali.
(14) Kharia.
(15) Kharwar.
(16) Khond.
(17) Kisan.
(18) Kora.
(19) Korwa.
(20) Lohara.
(21) Mahli.
(22) Mal Paharia.
(23) Munda.
(24) Oraon.
(25) Pahariya.
(26) Santhal.
(27) Sauria Paharia.
(28) Savar.
(29) Bhumij.

Racial Affinity.

Racially the Adibasis of Singhbhum are said to belong to a single stock, known variously as pre-Dravidian or proto-Australoid. Their general physical characters are short to medium stature, dark complexion, wavy hair, dolichocephalic or long head and platyrrhine or broad nose.

Linguistic Affinity.

Linguistically, the majority of the languages belong to Kolarian or Mundari branch of the Austric family of languages. The languages of the Hos, the Mundas and the Bhumij have a high degree of similarity; the Santhali language, though belonging to the same linguistic stock is slightly different. According to Colonel Dalton, as well as later writers like Mr. S. C. Roy, the Hos, the Mundas and the Bhumijs originally belonged to a single tribe living in the Chotanagpur plateau. Subsequently, they became differentiated in course of migration to different areas. Besides speaking their tribal mother tongue, the people also use Hindi, Bengali or Oriya in some areas.

Religion.

In the census reports, during the British rule, the tribal population has been classified as either Animists, Hindus or Christians and very rarely Muslims. The distinction between Hindu tribal and Animist tribal is often arbitrary, for it is often difficult to distinguish the religious rites of the tribal people from their local Hindu neighbours. In fact the aboriginal population in Singhbhum is, as in other parts of India, being gradually incorporated into the Hindu hierarchy of castes. The Hos, living comparatively isolated for a long time, in the Kolhan have as yet resisted this process. But with the rapid growth of communication and the development of mining centres, they are also moving in the same direction. The essential features of tribal religion of this area may be summed up as follows :—

(*i*) Belief in a supreme being, creator of the world and life, Sing Bonga or Dharam residing in the Sun.

(*ii*) A number of natural spirits.

(*iii*) Belief in ancestral spirits—Oa Bonga, Ora Bonga or Burha Burhi.

(*iv*) Belief in a presiding deity of the village—(Dessauli and his consort Jahira Buri) living in the sacred grove or *sarna*.

(*v*) Disease is brought about through the interference of malevolent spirits.

(*vi*) Absence of idolatry.

The religious affiliation of the Adibasi population in Singhbhum as enumerated in the 1931 Census Report is given below :—

Name of the Tribe.	Tribal religion.	Hindu.	Christian.	Total.
Hos	3,30,041	6,800	1,986	3,38,827
Santhals	1,01,869	38,076	165	1,40,110
Bhumijs	5,955	60,885	6	66,846
Mundas	29,607	16,602	11,241	57,450
Bhuiyas	—	25,468	—	25,468
Oraons	2,728	7,033	1,459	11,220
Kharias	1,279	4,590	10	5,879
Gonds	—	7,023	3	7,026
Bathudis	—	998	—	998
Birhors	12	—	—	12
Savars	—	762	—	762
Total	4,71,491	1,68,237	14,870	6,54,598

HABITATIONS AND SETTLEMENT PATTERN.

Except for the so-called wild Kharias of Dhalbhum and the wandering Birhors, who live principally by hunting and collecting wild produce, the majority of the Adibasi communities, namely, the Hos, the Santhals, the Bhumijs and the Mundas live a settled agricultural life hardly distinguishable from that of the Hindu agricultural castes living in the same region.

The settlements are almost always on the crest of gently undulating ground ; but on very rare occasions they also build houses on the slopes or on the top of hillocks. This is done for two reasons : the site remains dry during the rains, while the lower fertile lands are more profitably utilized for agriculture. Selection of a site for settlement is guided by two factors, namely, proximity to the agricultural plots, and of suitable supply of water. The Kharias and the Birhors, on the other hand, choose the neighbourhood of jungles, for their life is more closely tied to the latter. The settlements are in the form of packed agglomerates with houses arranged on both sides of a central lane from which bye-lanes may run with rows of houses on either sides. The main entrance door of the house invariably faces away from the road. The village or *hatu* comprises a single block of settlements or it may be divided into a number of hamlets

(*tolas* or *sahis*) situated within the village boundary. The size of the village settlement varies from 20 to even more than 200 houses.

There are indications that the pattern of houses of these people has undergone considerable change in the last fifty years. Formerly, the houses were two-sloped and thatched with wild grass, walls being made of upright *sal* logs placed side by side. These were left as they were or occasionally plastered with mud. Now-a-days along with two-sloped thatches, we also find thatches with four or even eight slopes. The wild thatching grass has largely given way to paddy straw or country tile (*khapra*), manufactured on the potter's wheel, and the walls are principally built of mud. The houses are kept clean by regular plastering with mud and cow-dung solution; the walls are painted with broad bands of yellow, black or white, giving a very colourful appearance. Very often these broad bands are further decorated with geometric drawings and occasionally animal figures. The colours are made from locally available materials; the red and yellow are obtained from red and yellow ochres ; the white made from soapstone and the black from burnt straw. Thus even to-day, in erecting their houses, the Adibasis are entirely dependent on locally available materials. The houses have a rectangular ground plan with sizes varying from about 18 to 20 feet in length and 12 to 18 feet in width. The height at the top varies from 10 to 12 feet ; in the dwelling houses the kitchen portion is divided by a partial partition wall and the kitchen which is also the sacred tabernacle or seat of ancestral spirits variously termed as *ading* or *bhitarghar.*

The number of houses owned by a family varies from one to four, depending upon the economic position and the size of the family. The houses are arranged on the four sides of central quadrangle or *racha* of the family. Among the Hinduised Bhumijs and the Bhuiyas a *tulsimancha* or mud platform for the sacred basil plant is erected at the centre of the courtyard.

ECONOMIC LIFE.

Agriculture, with the country plough, is by far the most important source of living among the majority of the aboriginal communities in this area. The principal crop is paddy. In the Sadar subdivision the seed is generally sown broadcast while in Dhalbhum transplantation is the prevalent custom. The production varies according to the slope of the land; the lowlands called *bare* or *bahal* being most fertile and the uplands called *gora* the least. Besides paddy, maize, various types of millets (*gundli*, *marua*, *sawan*, etc.), barley (*tilegangai*) and pulses (mainly *rahar*) are also planted. The winter crops include oil-seeds like mustard, *sarguja*, etc.

Besides agriculture, there are a number of subsidiary sources of income for the average farmer. These are cultivation of lac

on *kul*, *kusum* and *palas* trees; cultivation of cocoon on *asan* leaves; live-stock and poultry including cattle, buffaloes, sheep, goats, fowl, pigeons and rarely ducks; fishing and hunting.

As the forests are gradually disappearing economics based on the forest also tend to become rarer and rarer. Hunting is no longer regularly practised in most of the areas. But still the forest provides the Adibasi with some important articles, namely, wooden poles for building and agricultural implements, leaves for making leaf cups and plates, various types of roots and tubers used both as food as well as for medicine. It is quite probable that in the past, when the country was completely wooded, there was a greater dependence on the products of the forests. Even to-day the so-called wild Kharias and the Birhors subsist mainly on jungle products. It is not yet possible to say whether the ancestors of the present day Adibasis lived entirely by means of hunting and collection of wild products before coming into contact with technically more advanced communities.

The Adibasis as a class have very few specialized industries. They do not make baskets, earthen pots, iron implements or handloom products themselves. The wandering Birhors form an exception to it They procure part of their necessities of life, including paddy, in exchange of baskets and ropes that they make from bark fibres.

In economic life, though they are more or less self-sufficient in the production of their staple food the Adibasis have to be dependent on a number of artisan communities for essential manufactures. The potter (Kumbar) and Lohar make useful wares and tools like ploughshares, sickles, arrow-heads, hoe-blades, picks, etc., the Dom and Mahalis make the essential basketry goods, the The thari makes brass and other metal ornamen's, and so on. There is some evidence to prove that formerly trade was conducted through barter, but today, all transactions are through money, though with regard to local products circulated locally the barter system still prevails to some extent.

There are a number of weekly markets throughout the district where various local communities make their purchases and sales while merchants from outside have also come in to ply their own trade. The latter, who are generally Marwaris or Muslims, are responsible for the wholesale export of local articles, like rice, oil-seeds, lac, cocoon, etc. They are also responsible for the introduction of imported goods like mill-made cloths, ready made garments, spices, salt, kerosene oil, stationery goods, glass bangles, etc. Thus today Adibasis are no longer able to lead an economic life of isolation or self-sufficiency. Within their own locality, they are tied to local Hindu craftsmen for their essential needs and through the markets they are also linked up with the larger economy of the country.

Singhbhum district with its rich mineral wealth has given rise to important mining and industrial centres, namely, the iron mines of Gua, Noamundi, the copper mine at Musabani, the great Tata Iron and Steel Factory at Jamshedpur and the cement factory at Jhinkpani, etc. These centres have attracted a substantial number of Adibasi labourers, who, however, mostly occupy the unskilled ranks. They have not been able to adjust their habits to wage-earning economy and are often unable to utilise the hard-earned money beneficially. A large proportion of the money is spent in liquor and the purchases of unessential fashionable imported goods.

With regard to ownership of property, the Adibasis seem to be perfectly conscious of the right of the individuals and of the family. Ownership of any object in common by a group larger than family is not known, except for the public places in the village like the sacred grove, dancing area and so on. But there is a good deal of co-operation in economic matters. Exchange of agricultural labour is very common and communal hunting and fishing with equitable distribution of the spoils indicate their collective spirit. In thatching a new house it is customary that the adult males in the hamlet or *tola* are to co-operate in the work in return for only a sumptuous drink of rice-beer. Women contribute substantially in production operations. In agriculture, transplanting and weeding are the principal operation done by the females whereas ploughing and sowing are strictly the work of males. Harvesting and thrashing are done both by males and females.

With regard to agriculture, fragmentation of holding and pressure on land are gradually growing more acute. The population has now become divided into roughly four classes, namely, the wealthy mankis and mundas, substantial cultivators, poor cultivators and landless labourers. The economic stratification was probably much less pronounced in the past.

Food.

Boiled rice is decidedly the common staple food of the Adibasis in Singhbhum. Even the wild Kharias and the wandering Birhors who do not practise agriculture but procure rice in exchange of their collected jungle products or manufactured articles depend on rice. Next to boiled rice, home-brewn rice, beer, known generally as *handia*, *illi* or *diang*, is an important item of diet. To them it is the much cherished life-giving fluid. The other rice preparations are chapped rice or *chira* made by the Bagtis or the Bhuiyas, puffed rice or *muri* and rice powder cakes or *lahu*. The *mahua* tree (*Bassia latifolia*) provides them with a variety of food, the flower gives the distilled liquor, fruits are powdered to make cakes and the seeds are pressed for oil.

With progressive deforestation leading to gradual extinction of wild fauna, meat does not form a regular item of food now. The domestic animals and birds do not adequately compensate as these are kept either for sacrifices to spirits in time of urgency or sold for cash. As a result of contact with Hindu neighbours the Adibasis now observe some food taboos prevalent among the Hindus. The Mundas and the Bhumijs have entirely given up taking beef or pork. The Hos, too, have practically given these up. Among the Hinduised Bhumijs there is also a reformist movement for giving up even chicken. It is interesting to note that the Birhors have a singular habit of taking monkey's flesh. Milk is practically not taken at all by any of these tribes, though there is no specific taboo in this matter.

The low agricultural lands holding water during the rains and the *bunds* are the main fishing grounds. Small fishes are more or less regularly caught with basket traps, so that the intake of fish is probably more regular than that of meat. Dried fish is very much relished by the Hos and has a big sale in Chaibasa market. This habit appears to have come from Orissa which adjoins Singhbhum district.

Every house has generally an attached plot for kitchen garden, where common vegetables, like spinach, pumpkin, gourd, brinjal, cucurbitas, etc., are grown. Recently vegetables like cauliflower, cabbage or tomato are also being introduced. Besides kitchen garden products, the forests supply them with some edible roots and fruits. Pulses, such as *rahar* and *khesari* are grown on uplands and are regularly taken. Oil is sparingly used as a cooking medium and *ghee* is never used. Spices are simple, namely, chillies and turmeric. The Manki-Munda section of the population, that is the upper class, have very nearly adopted the diet habits of their more affluent Hindu neighbours.

Dress and Ornaments.

The dress and ornaments have changed considerably in the last fifty years. Formerly the adult male used to put on only a piece of cloth (4½′ × 10′) known as *botoi* among the Hos tied round the loins, with a small portion being allowed to hang in front. The women, too, used to put on a *lahanga* covering the portion from the waist down to the knees while the rest of the body remained uncovered.

Now-a-days, except among the so-called wild Kharias of Dhalbhum and the Birhors, the men generally put on a *dhoti* to cover the lower parts and wearing a guerhsey frock or shirt is fairly common. Among the factory labourers the use of shirts is becoming common.

For the women, an upper garment is considered essential today, particularly in the presence of *dikhus* or foreigners. The handloom *lahanga* has largely given way to mill-made *sari*. One end of the *sari* covers the breasts. Formerly the lower end of the *sari* did not hang far below the knees, but today it often stretches to meet the ankles in imitation of the Hindu neighbours. The Hinduised Bhumij women have adopted the custom of covering the head with a veil. The use of other under wears has become fairly common among the Ho women in the urban and industrial centres.

THE HOS.

In Singhbhum district, the Hos, otherwise known as *Larka kols*, are mainly found in the Kolhan area within the Sadar subdivision. They form the largest group among the different Adibasi communities residing in the district. Living in the jungle areas of South Singhbhum, the Hos resisted contact with the outsiders with considerable success till the British finally subjugated them in 1836.

Physical type.

Colonel Dalton wrote: "The Hos of Singhbhum and the Mundas of the southern Pergannah of Lohardaga district are physically a much finer people than the Bhumij, the Santhals or any of the Kolarians. The males average five feet five or six inches in height, the women five feet two inches. Many high nosed and oval-faced young girls are sometimes met with who have delicate and regular features, finely chiselled straight noses and perfectly formed mouths".

Mr. A. N. Chatterjee of Calcutta University measured 165 Hos and came to the following conclusions:—The average of heights, cephalic index and nasal index are 1.60 m, 75 and 82.9 respectively. These characters seem to fit in well with Haddon's pre-Dravidian features.

Social Organisation.

The Hos as a group more or less fully satisfy the definition of a tribe by occupying a contiguous territory, holding the political authority (now-a-days largely superimposed by an alien system of administration), speaking a common dialect of their own and regarding others as foreigners or *dikkus*. It is to be noted that the local Hindu artisan castes like the Lohars, Doms, Mahalis and Kumhars with whom the Hos have long-standing economic ties are not designated by the term *dikku*. The society is divided into a number of exogamous clans known as *killis*. In the clan, title descends patrilineally. At present most of the villages are inhabited by persons belonging to more than one clan, but er e a re definite indications that in the past villages were principally

inhabited by members of one clan. The total number of *killis* is not exactly known; Sri T. C. Das enumerated as many as 65 *killis* among the Hos of Seraikela but he presumes that the number does not cover the entire list. Some of the Ho *killis* bear the names of animals or plants, but no totemic tie is marked with regard to those objects. Many *killis* have been subdivided into a number of sub-*killis*. There is no chief for the entire clan nor has it a definitely demarcated territory. No property is owned by the clan membe.s as a whole.

In the Ho society today the simple family is even more important than the *killi*. The family is patrilocal with the father at its head.

In between the clan and the family there is an important intermediate group known as *haga* or agnates. The *haga* brothers and sisters are to help one another in all critical occasions like birth, marriage or funeral.

There are no important voluntary groups like the dormitory organisation among the Hos today, but there are evidences that they had dormitories in the past.

Though the factor of kinship bond is supreme in their social organisation, there is some definite social consciousness due to life within the limits of a village. The village or *hatu* has its own sacred grove, tutelary deities, headman or *munda* and the priest or *deuri* The village has its council or *panchayat* and the major festivals are organised communally. Further the inhabitants of the village are also often genealogically related. All these factors together make the inhabitants strongly conscious of the village affiliation.

The Hos are a typical patriarchal people having patrilineal descent in clan title, patrilocal residence and patrilineal succession to village offices like headmanship and priesthood. The property is divided equally among the sons. Women cannot hold property, except when they have no male relations; but widows and unmarried daughters have a right to maintenance. With all these limitations of right the women have considerable freedom and fairly high status in society. Women contribute substantially in economic operations and play a vital role in communal festivals with dancing and singing She has the right to divorce on genuine grounds.

The Ho society tends to show signs of being split into endogamous strata on economic lines. Thus there is a kind of non-official bar between the rich Manki-Munda class and the commoners. This stratification has not yet attained much rigidity.

Social customs.

Birth rites.—The Hos are aware of the cause for pregnancy At an advanced stage of pregnancy the woman has to observe many

restrictions of movement for fear that she may fall a prey to malevolent spirits. She is not to move about alone at night and even in the day time, she is not to go to the forest or by the side of the village tank or *bundh* alone. Sometimes a midwife belonging to the Ghasi caste is engaged to attend at the time of delivery; but more often it is the husband himself who attends the case. Immediately after the birth of the child the father heats some water and the new born child is washed. The period of pollution or *bisi* is not fixed; generally it is observed for eight days. On the morning of the eighth day, the child's head is shaved and it is bathed in tepid water. On the twenty-first day or occasionally on the thirtieth day after birth, the child is formally given a name. Naming is done by the process of divination. Two grains of *urid* pulses or paddy are thrown into a vessel of water in succession. If the grains float, the selected name is adopted; if they sink, the name is rejected and another is put to the same ordeal. The eldest son is usually called after his grandfather, and a set of the same names is thus apt to run in a family and render its genealogy very confusing.

Marriage rites.—The Hos consider marriage as essential for social existence. Adult marriage is the usual rule; the men marry at about 20 to 25 years and the women when they are from 16 to 20 years. Among the Manki-*cum*-Munda class we find a tendency to lower the age of marriage for the girls in imitation of their Hindu neighbours. The payment of bride-price (*gonung* or *pan*) is considered essential for marriage. The bride-price which entails at least 8 to 10 heads of cattle and some money (at least forty rupees now-a-days) seems to be too high for their economic capacity. One effect of this practice has been the increase in the number of unmarried men and women among the Hos in the Kolhan.

The bride-price is taken by the father, or if he is dead, by the brothers or nearest male relations; and many are the quarrels over it. The father tries to get as much as he can, and the daughters usually side with their father, caring apparently little for the prospect of impoverishing their future husband, if only their vanity is flattered by the magnitude of the price.

The Ho society allows a certain amount of pre-marital sexual freedom. This is particularly so during the *Maghe* festival in winter. Monogamy is the usual practice though there is no customary bar to taking several wives, but the children of the first wife are generally entitled to a larger share of the family property than those of other wives.

The orthodox form of marriage or *andi* is arranged by the guardians of both sides with the consent of the bride and the

bridegroom. Besides the orthodox form of marriage, which involves heavy expenditure in feasts and in the payment of bride-price there are also some alternative forms.

Rajikhusi (*love marriages or marriage by elopement*).—If a boy falls in love with a girl they have dates and meet one another at their convenience in the market or in any place of festivity. When their acquaintance grows deeper, the girl may elope with the boy. Subsequently, a comparatively small bride-price is fixed and handed over to the bride's parents to regularise the marriage.

Apartipi (*marriage by capture*).—This occurs rather rarely. A boy failing to win the heart of a girl by normal processes of wooing, keeps in hiding with a number of friends. When the girl passes by, they fall upon the girl and forcibly take her to the boy's village. The show of force is often superficial and so also the show of resistence on the girl's part. Subsequently a nominal bride-price is settled and the marriage is regularised.

Anadur (*marriage by intrusion*).—In this form the girl forces herself into the house of her lover by the back door. She is generally severely chastised by the boy's parents. Paying no heed to this initial resistence she attends to household duties and is ultimately accepted as the bride. This form of marriage is also very rare.

Recently among the Manki-Munda class a peculiar form has come into vogue known as *diku andi*. In this form of marriage, in addition to traditional tribal customs, some local Hindu rites have also been added, such as participation of a Brahmin priest and the employment of the Hindu barber.

There is no bar to a Ho marrying his mother's brothe'rs daughter or father's sister's daughter, i. e., cross-cousin. If the wife proves barren a man is entitled to get his wife's unmarried younger sister without payment of bride-price. A widow is free to marry again even after the birth of children. In such cases the children remain in the father's family. A man has right to marry his elder brother's widow on the death of his elder brother.

Divorce may be asked for in Ho society either by the husband or the wife, and the case is decided by the *panchayat* or the village council. A woman is granted divorce if the husband is suffering from incurable contagious diseases or is cruel in his treatment; while the husband can divorce the wife if she proves incorrigibly lazy or barren or guilty of adultery or if she is suspected of being a witch. It must, however, be said to the credit of Ho society that the actual number of cases of divorce is very small. A divorced woman is allowed to re-marry.

In Ho society there is no place for prostitution. Only in the neighbourhood of industrial centres like Gua, Noamundi or Jhinkpani there is found a certain amount of immorality due to the high wages earned by the workers and the fact that mostly they do not live with their families.

Funeral customs,—In case of normal deaths, the dead body is usually buried in the family ossuary, known as *sasan,* generally situated at the back of the household compound. Formerly cremation was more common and even today, the rich families practise cremation. The corpse is washed carefully in tepid water and anointed with turmeric and oil. Then the son of the deceased puts a handful of paddy into the dead person's right palm whence it is poured back into the son's right palm. The process is repeated three times and at the end the paddy grains are kept tied in a piece of cloth to be used in the first sowing of seed to get a rich harvest. The corpse is dressed in a new piece of cloth and carried to the grave. The grave is about 6 feet in length, 3 feet in width and 4 feet in depth. The corpse lies on its back at the bottom of the pit and some coins are put inside the mouth. Grains of rice or paddy, some of the used clothes, plates and cups are also placed inside. The pit is then covered with earth. On the fifth or the seventh day after the death the soul or the spirit of the deceased is ceremonially called back to the sacred tabernacle or *ading* to merge with the ancestral spirits or Oa-Bongas. At nightfall the *ading* is kept clean and ashes are spread on the floor of the room near the entrance door to the *ading.* The members of the family sit in the room and a member of male or female relations begin to call the name of the deceased in a waiting chorus—"Oh spirit of so and so, come, enter through the door. There are gnats and insects in plenty. Come, enter the house. It is cold outside. Come, enter the house."

Each time this chant is uttered, one of the relations at the head strikes two ploughshares to make a sound and the one following him, pours water on the ground. After repeating the incantation seven times, the inmates of the house light a lamp and examine whether any mark of foot-print is discovered indicating the actual entry of the soul.

The final ceremony connected with funeral is bringing in the *sasan-diri* or stone-slab and placing it at the grave. The stone-slab is kept in a horizontal position. The size of the stone-slab, to some extent, indicates the economic capacity of the deceased. A huge slab is brought after considerable labour, when the mourners are entertained with sumptuous drinks of rice-beer. In case of death of an important person, a vertical slab is erected at the junction of roads or by the side of a tank. Now-a-days it is common to add inscriptions in Devanagri on the vertical slab giving the date and cause of death of the deceased.

In case of cremation, the charred bones are put inside a small earthen pot whose mouth is kept covered by a new piece of cloth. This earthen pot is placed inside a hole which is subsequently covered up in earth. On this is placed the stone-slab.

In case of unnatural death due to small-pox, cholera, snake-bite or attack by ferocious animal the corpse is buried in an out-of-the-way place away from the family *sasan*. The calling back of the soul is not performed in such cases as the departed souls are believed to turn into revengeful malevolent spirits.

Religion.

Belief in spirits or *bongas* is the principal feature of Ho religion. The spirits form a hierarchy, the presiding deity of the pantheon is the Sun God or Sing Bonga, who created the world and life and is responsible for crops and the rains. He is worshipped with offerings of liquor and the meat of fowl and goats. It is interesting that the animals offered are always white in colour. Only second to Sing Bonga in power is the great Harangbonga who is in a way the presiding deity of the clan, for each clan has its own Harangbonga. The village has its sacred grove Jahira where the village tutelary god Dessauli resides with his consort Jahira Buri Naserabonga residing in water is the presiding deity of water and he has to be offered turmeric powder. The household deities or ancestral spirits, the Oa Bongas are worshipped regularly on each festive occasion.

Besides the above mentioned deities whose functions are generally beneficial for man unless unduly irritated, there are also a number of spirits who are specifically malignant and bring sorrows on men in the form of illness, death or failure of crops. Danri Bonga, Churin, Mahali Bonga, Gora, Chudra, etc., fall into this latter class.

For conducting communal worship on behalf of the villagers, every village has its priest or *deuri*, office being hereditary. He worships the *bongas* on the occasion of every important festival, this being generally performed in the sacred grove. In this worship he is mainly concerned with Sing Bonga, Narang Bonga, Dessauli, Jahira Buri and Oa Bongas. He offers prayers along with offerings of *illi* or rice-beer and fowl.

To the Hos, disease is usually caused through the interference of a malignant spirit or evil magic. To counteract these evil influences there are medical men or *deonas*. They first of all divine the cause of disease by examination of urine, by oil process or by *sup* (winnowing fan) proof and then divine the remedy which is generally in the form of spells, along with an offer of sacrifices. It is significant that whereas the *deuri* is invariably a Ho the *deona* or medical man in many cases does not belong to that tribe. In the spells of the *deona* many Hindu deities

such as Debima, Durgama, Kalima, Hanumanbir, etc., are involved along with typical tribal deities.

Belief in witchcraft is very extensive among the Hos, the witches are supposed to move about at the dead of night, completely nude and assemble under a tree and dance. A woman suspected of witchcraft is generally driven away from the village, after severe beating. Sometimes this gives rise to fatal results. There are professional witch-finders, *khonses*, *sokhas*, who divine the name of the witch responsible for a particular case of disease or ill-luck.

"All disease in men or animals,'' "writes Colonel Dalton, "is attributed to one of two causes,—the wrath of some evil spirit who has to be appeased, or the spell of some witch or sorcerer, who should be destroyed or driven out of the land. In the latter case, a *sokha* or witch-finder is employed to divine who has cast the spell, and various modes of divination are resorted to. One of the most common is the test by the stone and *paila*. The latter is a large wooden cup, shaped like a half coco-nut, used as a measure for grain. It is placed under a flat stone as a pivot for the stone to turn on. A boy is then seated on the stone supporting himself by his hands; and the names of all the people in the neighbourhood are slowly pronounced, and as each name is uttered, a few grains of rice are thrown at the boy. When they come to the name of the witch or wizard, the stone turns, the boy rolls off. This, no doubt, is the effect of the boy's falling into a state of coma, and losing the power of supporting himself with his hands. In former times, the person was denounced and all his family were put to death, in the belief that witches breed witches and sorcerers. The taint is in the blood.

Exorcism.

"Some of the *sokhas*, instead of divining the name of the person who has cast the evil eye on the suffering patient, profess to summon their own familiar spirits, who impart to them the needed information. The *sokha* throws some rice on a winnowing sieve, and places a light in front of it. He then mutters incantations and rubs the rice, watching the flame, and when this flickers, it is owing to the presence of the familiar; and the *sokha* to whom alone the spirit is visible, pretends to receive from it the revelation, which he communicates to the inquirer, to the effect that the sufferer is afflicted by the familiar of some rival *sokha*, or sorcerer, or witch, whom he names. The villagers then cause the attendance of the person denounced who is brought into the presence of the sufferer, and ordered to haul out his evil spirit. It is useless for him to plead that he has no such spirit—this only leads to his being unmercifully beaten; his best line of defence is to admit what is laid to his charge, and to act

as if he really were master of the situation. Some change for the better in the patient may take place, which is ascribed to his delivery from the familiar, and the sorcerer is allowed to depart. But if there is no amelioration in the condition of the sick person, the chastisement of the sorcerer is continued till he can bear no more, and not unfrequently he dies under the ill-treatment he is subjected to, or from its effects. A milder method is, when the person denounced is required to offer sacrifices of animals to appease or drive away the possessing devil ; this he dares not refuse to do. And if the sickness thereupon ceases, it is of course concluded that the devil has departed; but if it continues, the sorcerer is turned out of his home and driven from the village, if nothing worse is done to him."*

"The *sokha* does not always denounce a fellow-being; he sometimes gives out that the family *bhut* is displeased, and has caused the sickness. In such cases an expensive propitiatory offering is demanded, which the master of the house provides, and of which the *sokha* gets the lion's share. It is not only women that are accused of having dealings with the imps of darkness. Persons of the opposite sex are frequently denounced; nor are the female victims invariably of the orthodox old hag type. The person denounced does not always deny the charge, as may be gathered from the following story told to Dr. Ball by the Deputy Commissioner. A Ho having lost some of his cattle by disease employed the witch-finder to discover the author of the mischief. After the usual incantations, a certain old woman was pointed out. On being charged with the offence she calmly admitted that she was guilty of having "eaten " the cattle She was, however, forgiven, but warned against causing any further injury. After a time the man's eldest son died, and the woman was charged with having "eaten" him Again she admitted the charge, but this time added : "I was not alone in doing so, but was aided by three sisters." All the women of the village and neighbourhood having been assembled, they were made to sit down in a circle, and the old woman, walking round, dropped fragments of cloth behind each of the three whom she accused. They were made to stand forth, and likewise admitted that they had shared in devouring the young man. The father, addressing the first old woman, said: "I forgave you for eating my cattle, but this I cannot forgive." Arming himself with a sword, he caused the four women to carry down to the riverside the bier upon which his son was laid. He then proceeded to kill and cut off the heads of the women, one after another, none of them seeking safety in flight, though the last took temporary refuge under the bier. Having accomplished the quadruple murder, the man forthwith delivered himself up to justice, and in his subsequent trial,

**Ethnology of Bengal* by Dalton.

detailed with full *minutioe* all the circumstances of which the above is a brief sketch."*

Dalton, Commissioner in 1860, had to take measures to put down the practice of *sokha*. He wanted it to be declared a crime for any person to practise as a *sokha* or for any person to employ a *sokha*.**

Even in 1838 in his famous despatch Wilkinson mentioned "that there must be spread of education to put down witchcraft and the institution of *sokhas* who make divinations and indicated some one as the witch that led to her murder. But *sokhaism* and witchcraft have not yet been stamped out. There are still dozens of murders every year due to the belief in witchcraft."

Other beliefs of the Hos.

There is no place for idolatry in traditional Ho religion but there are evidences of anthropomorphism in their concept of deities as is evident in their dreams. The religion is entirely practical concerned with happiness in this world. Supernaturalism is divorced of any ethical context.

The Hos believe that death is caused by the escape of the soul through the mouth, nostrils or the eyes. The soul is ordinarily invisible, but may appear at will in any form. There is no concept of good or evil and corresponding belief in heaven or hell associated with soul.

Though the Hos have resisted conversion to Christianity and Hinduism remarkably well, they have a few Hindu elements in their religion. Objects of worship by the Ho medicineman sometimes include typical articles used by the Hindus such as molasses, *ghee*, milk, curd, honey, paste, flower and oil lamp Some Hindu deities like Kalima, Durgama, Debima, Mansama have been included in the spells of the Ho medicineman. It is significant that all the above Hindu deities are looked upon as malevolent in character. In few villages, like Munda, Lagra, etc., the Ho *Mankis* have established temples of Siva, where Brahmin priest performs *puja*. But compared to the collateral groups like the Mundas and the Bhumijs, Hinduisation has been definitely very slow in case of the Hos. Christian Missionaries also have not been very successful in converting the Hos. All this is due to the Mankis and Mundas who have a rigid control on the Ho society.

Festivals and Entertainments.

The Ho has to earn his living by the sweat of his brow. But the drudgery of economic life is intermittently relieved by

---

*V. Ball, *Jungle life in India*, pp. 115-116.

**Please see "Singhbhum Old Records" in this connection. In 1857 taking advantage of the disorder a number of supposed witches were put to death. (P. C. R. C.)

a regular cycle of festivals. Each important festival is marked by the following essential features:—

(1) the houses are repaired, cleaned and painted on the occasion, (2) offerings are made in the sacred grove, (3) there is excessive drinking of rice beer, (4) there are communal dances while sexual restrictions are relaxed.

Maghe Parab.

The chief festival is the *Maghe parab*, which takes place in January-February, after the harvesting is over. At each village, the festival continues for seven days, when revelry reaches the maximum on the fourth day, i. e., the date of *Marang-Maghe*. During this festival a great deal of sexual laxity is permitted and it is customary to utter foul words, indicative of the sexual act, in chorus in the presence of elders and females. The parents and guardians refrain from restricting the amorous enterprise of the youth. In the villages near Chaibasa, these excesses have been considerably minimised but in interior villages of the Kolhan like Demkapad, Rampara, etc., they are still very common

Col Dalton has given a lurid account of the excesses practised on *Maghe* festival. The festival becomes bacchanalian during which relationships and obligations are forgotten. Servants forget their duty to their masters, children their reverence for parents and men and women throw notions of modesty, delicacy and gentleness to the wind. Sons and daughters revile their parents in gross language, and parents their children. The adults, men and women, indulge in excessive amorous propensity very openly.

This kind of open indecency and licentiousness do not altogether hold good at the present day But it is true the *Maghe* festival is rather typical

Ba Parab.

The next important festival is the *Ba parab* or flower festival. This takes place when the *sal* tree is in bloom for the first time in the year. *Sal* flowers are gathered by the village youths and dames and at the sacred grove, offerings are made to the village tutelary deities with new *sal* blossoms, rice-beer and fowls' meat; *puja* is followed by dancing. The dancing is comparatively quieter than in the case of the *Maghe-parab* and no open breach of decorum is perceptible on this occasion. One cannot eat new fruits of the jungles or use *sal* leaves for making leaf plates or cups until the *Ba parab* is over.

Ba parab reminds one of the ancient flower festival which was much in vogue in Bihar during the Buddhist days. The sight of the Ho women dancing under the flowering *sal* trees and

breaking the *sal* leaves and flowers reminds one of the familiar but rare *Salbhanjika* figures which could still be seen at Bharhut or Bodh Gaya temples.

The other festivals.

Damurai or Babammuth—celebrated in May at the time of sowing of the first rice crop. A he-goat and a cock are sacrificed and the ancestral spirits are worshipped.

Haro Parab—is performed in June when the leveller is used for the first time on the transplanted plots. *Puja* is offered to *Dessauli* and *Jahira Buri* to secure blessings on the crops. It is customary to offer rice-powder cakes known as *hero-lan* on this occasion.

Batauli Parab—follows the *Haro Parab* near about July. This is also associated with the fertility of the crops. Each cultivator sacrifices a fowl and after some mysterious rites a wing is stripped off and inserted in the cleft of a bamboo, and stuck up in the rice field and dung heap. If this is omitted, it is supposed that rice will not come to maturity.

Jemnama or eating the new rice—takes place in August when the upland rice or '*Gora Baba*' ripens. At this festival the first fruits of the harvest are offered to *Sing bonga* along with sacrificing a white cock. The ancestral spirits in the *ading* are also given new rice preparations on this day.

Kalam Parab—This is a sort of thanks giving ceremony to *Dessauli* and *Sing bonga* for giving a good harvest, and takes place either before starting the thrashing operations or when thrashing operations are over.

Most of the lesser festivals except the *Haro* and the *Batauli*, are organised by individual households separately. But there are indications that in the past these festivals were also organised collectively. Even today in most villages it is customary that the lesser festivals cannot be started by individual household till the *deuri* has completed *puja* in his house.

Amusements.

The most favourite amusement of the Hos is group dancing. Each village has its dancing ground or *Susun akra*. Now-a-days dancing is restricted only to specific festivals or on occasions of marriage. Each occasion has its typical rythm and movement. In some of the dances, i. e., *Maghe* dance or marriage dance, boys and girls join together. A boy and a girl standing alternatively in the circle the movement is alternatively anti-clockwise and clockwise. At the centre of the dancers stand young men with drums, violin or *banam* and flutes or *ratu*. Dancers follow

the beat of drums, sometimes dances are accompanied by songs but very often the dance only takes the lead from a song. The *Maghe* dance has particularly fast and amorous movements. In the *Ba* dance only the women stand in the circle while the boys participate merely as musicians. There is no special dress for dancing.

Cock-fighting is also a popular pastime. At every weekly market or *hat* may be found a number of Hos collected in a corner of the market place indulging in the sport. On these occasions betting in pice is sometimes done, but as a rule the stake is limited to the vanquished cock, which becomes the property of the owner of the victorious bird. The birds are invariably equipped with steel spears tied to one of the legs. Women, as a rule, avoid seeing this cruel game.

Hunting, which was probably in the past a regular means of livelihood, is today at least a favourite pastime in those parts where patches of jungles still persist near the settlements. The grand season of hunting is between January and June.

To quote from Colonel Tickell's amusing account:—"The Hos are keen sportsmen, a fact which the *Sahib log* at Chaibasa soon found to their cost; their Mantons and Purdeys and Westley Richards might as well have been left unpurchased, for scarcely a living thing in the shape of game could show itself in the neighbourhood, without the country being up in pursuit. In the quail season, when the *dhan* is cut, every herdsman tending his cattle has his hawk on his fist, besides parties of youngsters from the villages, who keep close ahead of the cattle, and the instant a quail or partridge rises, the nearest *richi* or *chikra* cuts short his existence. I have frequently, returning home with an empty bag, met parties of them with provoking bunches of dead quail in their hands. On these occasions they would laugh heartily at the success of their system over mine, but generally end by offering me half of their spoils. My retaliation used to be in the snipe *khets*. These birds, they confessed, their hawks could not overtake, and a successful right and left shot would restore the credit of the *banduk*."*

They also organize great battues, described by the same writer as follows:—"From the burning of the grass till the new crop becomes too high, i.e., between January and June, the Hos scour the Jungles, in large parties and at uncertain periods for wilder game, surrounding and driving to a centre the deer and other animals. But the grand meeting is in May, about the Chait *parab*, when people of all sects and classes repair to the hills north of Singhbhum. The preliminaries of the drive are arranged by ambassadors and emissaries from Singhbhum, the Kolhan, and the Jungle Mahals, and vast multitudes draw in from every

*The *Hodesum* (improperly called the Kolehan), Journal of Asiatic Society of Bengal, 1840.

quarter from Sikharbhum, from near Bankura and Midnapore on the east, and from the borders of Chotanagpur on the west. On the given day these crowds, extended in lines, draw towards a common centre, sweeping the Jankiburu hills and other ranges which reach from Chotanagpur to the Subarnarekha river, separating Tamar from Singhbhum; as the lines approach each other, the slaughter commences.

"The uproar is difficult to describe, and the scene the wildest imagination can picture. Those deep secluded villages, those barely pervious dells, the huge solitary hill-tops, buried in one vast sheet of pathless jungle, which except on this annual occasion, are never visited by man, now swarm with countless hordes. In front of them the different animals pass and repass, bewildered by opposing hosts. The huge *gaurs*, roused from their noonday retreats, stalk with stately steps along the hillside, till infuriated by the increasing din, they rush through the forest, heedless of rock or ravine, and rending the branches in their ponderous flight; the wild buffaloes thunder across, brandishing their immense horns, stamping and wheeling round their young ones; *nilgais* gallop fast like a charge of cavalry. The stately *samber*, the beautiful axis, the barking deer or *mantjak*, dash along, clearing the copsewood with flying bounds, and suddenly stopping with erect ears and recurved neck, as the tainted gale warns of danger ahead. The fairy-like *orey*, or small red-deer, with noiseless feet comes skimming over the tangled underwood, stepping in wild starts to the right and left, and sorely bewildering a host of Rajas, Thakurs, and their bodyguards, who perched upon *machans* (scaffolds), in vain try to bring their lengthy matchlocks to bear; with snort and puff a 'sounder' of pigs scurry through. The redoubled uproar from without attracts the attention to something which has excited the beaters. The reeds and grass are seen to wave, as if some bulky form were sliding through them; and at length, loath to leave the haunts which had concealed him so long, out comes the tiger, with a lumping, stealthy trot, crouching to the earth, with ears quivering, and turning to catch every sound. He has soon passed on into the leafy depths, from which his hollow growl may be occasionally heard. And last of all, as the peacocks begin to mount into the air, and the jungle fowl with noisy cackle take wing, a loud sonorous grunt or shout ushers in the sturdy old *bhaluk* (bear), who forced from the friendly shelter of rocks, comes bundling over the ground and shaking his sides in a heavy gallop, oft stopping, wheeling round, and threatening his enemies.

"The reports of matchlocks, the 'click' of the arrows striking against trees, the shouts of the multitude, the roars, the screams, and groans of the animals, the piping of flutes, the beating of drums, the braying of trumpets reach their climax, and the multitude, composed of all classes and sorts, meets near the Raja's

machan to compare notes of the sport. Here are the ever-dancing and singing Santhals, dressed out in flowers and feathers, with flutes ornamented with streamers made of pith; the wild Kharias or hillmen, from the Lakhisinni hills in Barabhum; the Kurmis, Tantis, Sunris, Goalas, Bhumijs, etc., with sonorous *dammas* or kettle-drums, and other uncouth music, armed with swords, *balwas*, and bows and arrows of every description; the Hos, simple and unpretending, but with the heaviest game-bags; the little ill-featured Tamarias, with spears, shields, and matchlocks; the Nagpur Mundas, with huge ornaments stuck through their ears, indifferently armed with bows and arrows, clubs, or *balwas*; the southern Kols and the far-comers from Saranda, with their chain earings and monstrous *pagris*; the Bhuiyas, with their long bows ornamented with horse tails or the feathers of the blue jay, and their immense barbed arrows; the *paiks* of the Rajas, Thakurs, Kunwars and other zamindars, with their shields, *talwars*, powder-horns, and immense matchlocks with rests, dressed out in all colours; lastly the Rajas, Thakurs, etc., themselves, with guns of Delhi manufacture, prodigious scimitars, or an occasional *angrezi banduk* (English gun), the gift of some *Sahib* long passed from the scene, seldom fired, but kept for show in a venerable clothing of rust."

The Ho children play a number of games—*cheer*, *kanju*, *kasa*, *kotadanda*, *tukaodanda*, *kulaochal*, *landapari*, *ocale-ine*, *mali-ine* in water, etc., which are arranged on competition basis individually as well as in groups. When a number of Hos meet together on any happy ceremonial occasion, it is common to place and solve riddles or *chapakad kahni*. Recital of folk stories is also another amusement.

Trends of change.

When in 1836 Kolhan was finally subjugated to British rule the country was completely wooded. Through more than hundred years of British rule the cultural landscape has considerably altered. Railway lines and motorable roads have made considerable headway, there has been a terrible amount of deforestation and a rapid growth of industrial and mining centres. All these have caused a considerable influx of immigrants into this country, which was formerly rigorously avoided by neighbouring people. It is evident that all these have had a comprehensive repercussion on the cultural life of the Hos. Sri Tarak Chandra Das * summarises these changes as follows:—

> "The Hos of Kolhan were a martial race before they were subjugated by the British in the first quarter of the 19th century. Their habitat was a sealed territory

---

* T. C. Das—*Disintegration of Culture in a tribe of Chotanagpur in Bihar (India)*—Proceedings of the XIV International Congress of Sociology (Vol. IV), Rome, 1950.

to outsiders and they developed their culture in the forest-clad plateau of Kolhan undisturbed by outside influences. The conquest of the British brought in its train the much hated *dikkus* (foreigners) who forthwith began the economic exploitation of the people and their habitat. The martial spirit was soon destroyed and Britannica reigned everywhere in the forests. The population increased beyond the supporting capacity of the land resulting in the growth of a class of landless labourers who now flock to the mines and factories which have been established by the *dikku* in the heart of Kolhan. There they came in contact with outsiders of questionable characters. The establishment of administrative towns, market towns, schools, hospitals and the opening up of railways have also contributed to the same directions. The social organisation, material culture and economic life of the tribe are undergoing serious changes, most of which are detrimental to the best interest of the tribe. Abandonment of villages, break-up of moral life, division of the tribe into two communities in the pattern of the Hindu caste system, growth of a class of landless labourers, adoption of money economy in place of barter, use of luxury articles purchased with staple food, taboos on healthy food in imitation of the Hindus and the development of parochial consciousness in the political field are some of the evil influences of the contact with the advanced. This is not only the case with the Hos but is found in other tribes as well where they have come under the direct influence of the advanced people."

The Santhals.

The Santhals are almost entirely confined to Dhalbhum. We are not yet in a position to ascertain whether they lived in Dhalbhum before the great exodus to the Santhal Parganas in the early part of the last century. In Dhalbhum they earn their livelihood by agriculture or by selling their labour. Unlike the Hinduised Bhumijs of Dhalbhum the Santhals have not given up taking beef or pork. Whereas the Hinduised Bhumij women have practically given up dancing, the Santhal women have still maintained their tribal dances. The Santhals of Dhalbhum still mainly speak Santhali.

The Bhumijs.

Sir Herbert Risely demarcated Dhalbhum along with the contiguous portion of south Manbhum as the typical habitat of the Bhumij tribe. Within Singhbhum district they are principally concentrated in Dhalbhum, Seraikela and Kharsawan while a few

are also scattered in Kolhan area. They have been identified by Colonel Dalton and Sir Risely as a direct offshoot of the Mundas of Ranchi plateau, who have been considerably acculturated in contact with Bengali-speaking Hindu neighbours. A small minority of the unreformed Bhumij still speak the tribal Bhumij dialect. There are five castes among the Bhumij of this district, the Deshi who are believed to be original inhabitants of the country, ranking first. The Barabhumia and Sikharia rank second, the Patkumia third and the Tamaria last. Besides these there is a section known as Shelos who until recently lived principally by smelting iron. The Bhumijs of Dhalbhum observe many of the Hindu festivals but have also retained their sacred grove or *Jahira*, in which they offer sacrifices to their ancient gods. In imitation of the Hindus, they now perform *sradha* ceremony in which fallen Brahmin priest officiates for them. The presence of Brahmin is also considered essential in marriage ceremony. The Hinduised Bhumijs of Dhalbhum also offer great respects to the local Vaishnavas. The small number of Bhumijs living in Kolhan speak the Ho language and observe all the festivals in common with the Hos.

THE MUNDAS.

The Mundas of Singhbhum belong to the large Munda tribe of Ranchi plateau. They have mainly their residence in Porahat, three-fourths of their total number are found in the thana of Chakradharpur. In physical features, language, social organisation, social customs and religious rites the Mundas resemble the Hos very closely. They have also practically the same annual cycle of festivals as the Hos with the difference that whereas among the latter the *Maghe Parab* is most important, in the case of Mundas, it is the *Ba-Parab* instead.

THE BHUIYAS.

According to local tradition the Bhuiyas are among the oldest inhabitants of Singhbhum. It is said that when they were oppressed by the Hos they called in the help of the Rajput soldiers of Man Singh, who subdued the Hos and named the country they conquered, i.e., modern Porahat, Singhbhum. To this day the Bhuiyas offer *tilak* to the Raja of Porahat on his investiture. The Bhuiyas like the Bhumijs, are gradually becoming Hinduised. At present among the Hinduised section employment of Brahmin priest in marriage ceremony and funeral rites is considered essential. The cult of Vaishnavism has influenced them to a large extent as among the Bhumijs.

THE KHARIAS.

In Singhbhum the Kharias are practically concentrated in Dhalbhum. The Kharias of Dhalbhum lead a rude economic

life compared to their kins in Ranchi who practise settled agriculture. As early as 1866-1867, V. Ball wrote about the Kharias of Dhalbhum as follows:— "They inhabit the crests of highest ranges in Manbhum, Singhbhum and the tributary States of Chotanagpur and Orissa and are shunned even by the Hos and the Bhumijs on account of their reputation as wizards. These wandering savages, like the Birhors of Hazaribagh and Palamau, whom Colonel Dalton supposes may belong to the same tribe are now believed to be rapidly dying out."

In Dhalbhum the wild Kharias settlements are situated mostly at the foot of the hills or sometimes even on hill tops. They are very shy of strangers and choose to live in isolated jungles. They seem to be slightly shorter in stature than the Mundas and are extremely platyrrhine, their average nasal index being 92. The wild Kharias are still in the food-gathering stage. They mainly depend upon the products of the forests in the midst of which they live. They dig roots with the iron-tipped digger or *khonta* and collect wild fruits. They are expert tree climbers and regularly collect honey. Compared to collection of vegetable products, hunting affords them with little regular supply of food. Fishing with simple baskets is quite common. With rapid deforestation the Kharias find it hard to maintain their living on mere collection of wild products. But as they have not yet been able to take to settled agriculture or other fruitful occupation they lead a very precarious economic existence, mortality rate of children is very high and people are rarely found to live up to an old age. This economic distress often compels them to take to stealing and robbery from their settled neighbours. Monogamy is most widely prevalent among the Kharias though polygamy is not tabooed. Leviration is practised. The binding portion of Kharia's marriage seems to be concentrated in the function of the bride and bridegroom mutually anointing the forehead with vermilion (this is known as *sindurdan*). Burial seems to be the approved method of disposing of the dead; though cremation is also resorted to at times. In marriage as well as funeral rites the Kharias do not employ Brahmin priest or Hindu barbers.

The Birhors.

The term 'Birhor' literally means people of the jungle (*Bir*-jungle, *Hos*-men) and this fits in very well with the wandering hunters and collectors' life which these people lead. The Birhors move about mainly along the line of hills running from the Ramgarh thana in the Hazaribagh district on the north along with Ormanjhi, Angara, Ranchi and Bundu thanas on the east of the Ranchi plateau. A few scattered groups have strayed into Singhbhum district.

Ethnologically, the Birhors belong to the same dark-skinned, short-statured, long-headed, wavy-haired and broad-nosed race to which the Mundas, the Santhals, the Bhumijs, the Hos and other allied tribes belong. Like other allied tribes the Birhors speak a language classed within the Mundari group in the Austro-Asiatic sub-family of language.

According to their economic habit the Birhors are classified into two groups—the wandering Birhors or *uthlus* and the settled or *jaghis*. The Birhors of Singhbhum mostly belong to the former class. Except in the rainy season, *uthlu* Birhors constantly move about from jungle to jungle. The settlements whether temporary or permanent are known as *tondas* which consist of usually half a dozen or more huts. The huts of the *uthlus* are more improvised leaf sheds (*kumha*) in the form of low triangular tents with conical spaces. The individual house in a *jaghi tonda* is of a more permanent nature and is comparatively more commodious with rectangular ground plan and two sloped roofings. Sometimes there is also a thin plaster of mud on the walls made of leafy branches.

The *uthlu* Birhors do not practise any form of agriculture and are entirely dependent upon the collection of forest products for their living. Occasionally they also do a little bit of fishing with small basket traps. From the forests they collect edible roots, fruits, honey and barks of *Bauhinia soondos* (for the manufacture of rope baskets, etc.). They also hunt birds, deer and monkeys. The Birhors are noted for their love of monkey's flesh and skill in trapping these animals. They procure their stapple food, i.e., rice from the neighbouring agriculturists in exchange of forest products like fruits of the jungle, wild potatoes, honey and manufactured goods like net, cattle tying rope (*tether*), hunting nets (*hupa*) and baskets used in oil press. During the rainy season when they are unable to move about, they make wooden cups or bowls. Taking as a whole, dependence on forest products does not allow the Birhors to maintain local self-sufficiency and a life of economic isolation. They have constant contact with the agriculturist folk living in the cleared areas for procuring rice, cloth, and some essential manufactured articles like earthen pots, iron implements, etc., in exchange of forest products and their special manufactures. Ownership of property is strictly vested in the family though there is a good deal of co-operation among the *tonda* members on the occasion of communal hunting.

In their social organisation the following groups play most important roles :—(1) the family, (2) the *tonda* or settlement group, and (3) clan. The family is invariably of the simple type with father at its head. *Tonda* has a headman called *naya* who is also the priest of the groups. He has his assistant known

as the *kotwar* or *diguar*. The members of the *tonda* group go out together for communal hunting, the most important of which is the monkey hunt or *geri sendra*.

The tribe is divided into a number of exogamous patrilineal clans, called *gotras* mostly named after some animal, plant, fruit, flower or material object, such as *andi* (wild cat), *bonga sauri* (a kind of wild grass), *geroa* (a small bird *Gidhi* or vulture) and *hembrom* (betel palm), etc. There is distinctive association of totemic taboos with the clan names, a Birhor must abstain from killing, destroying, maiming, hunting, injuring, eating or otherwise using the animal, plant or other object that forms his clan totem, or anything, made out of or obtained from it. Thus the men of Murum clan covers their eyes when they happen to come across a *murum* or stag.

Marriage is considered indispensable for every Birhor and adult marriage is the usual rule. Mr. S. C. Roy enumerates ten different forms of valid marriage among these people, viz., *Nam-napam Bapala* (love marriage), *Udra Udri Bapala* (elopement marriage), *Balo Bapala* (intrusion marriage,) *Sipundur Bapala* (forcible anointment of the bride's forehead with *sindur* at a public place), *Singha Bapala* (widow re-marriage), *Hirum Bapala* (a married man marrying for the second time while the first wife is alive), *Kiring Jawae Bapala* (brought son-in-law marriage), *Golhat Bapala* (marriage by exchange of mates between two families), *Bing Kaihi Bapala* (a marriage without payment of bride-price), and *Sadar Bapala* (a regular marriage by negotiation between the guardians of the two groups).*

The corpses of children and women dying in child birth are buried. In other cases cremation is preferred but burial is optional and the normal mode of disposal during the rains. Brahmin priest, a Vaishnav or Hindu barber has no part to play in marriage and funeral ceremonies.

The magico-religious beliefs and practices are practically identical with those of the Hos. The Birhor's whole life, economic, domestic and socio-political, is pervaded by his belief in supernaturalism. Typical Mundari deities like *Sing bonga* (Sun God or Supreme Being), Haprom (ancestral spirits), *Buru bonga* (ancestral family spirits) rank highest in Birhor religion. Contact with Hindu neighbours has left little impression on the essential structure of their belief in supernaturalism; only some Hindu deitie like Debimai, Kalimai and Mahadeb have been included in their pantheon.

The Birhors have an established reputation of being law abiding and honest.

* "The Birhors" by S. C. Roy (Ranchi).

WELFARE OF THE ABORIGINALS.

Under the British administration tribal areas were demarcated as partially or fully excluded areas under the plea of safeguarding the interest of primitive backward communities. This resulted in the creation of an artificial barrier between the Adibasis and the non-Adibasi population. In their welfare projects for the aboriginals, the Government of India are particularly keen on breaking the isolation of the aboriginals. The Aboriginals Welfare Department came into being in 1947-48. The district staff comprises one District Aboriginal Welfare Officer and 36 Thana Welfare Officers under his supervision. This department aims at effecting an all-round improvement in social, cultural and economic development of the aboriginals. The main channels through which these are sought to be achieved are described below :—

1. *Opening of grain-golas to reduce rural indebtedness and then supply of paddy seeds at the time of sowing.*—Each grain-*gola* has capital of 1,000 maunds of paddy and is required to serve the needs of 20 villages. Simple interest of 25 per cent is charged on these loans, while the local village money-lender charges at least 50 per cent in compound interest.

2. *Education.*—A sum of Rs. 50,000 is being spent every year in district in the form of stipends to aboriginals reading in schools. Besides, all who join college are almost invariably awarded stipends.

Seventeen hostels for aboriginals are being maintained by the Welfare Department in this district. Boarders are not required to pay any charges for accommodation. About 800 students have been thus accommodated.

About 300 night school centres for primary education among the adults were started by the efforts of Thana Welfare Officers of this district.

3. *Health measures.*—The Thana Welfare Officers regularly visit the villages in his jurisdiction and explain to the villagers the benefits of cleanliness. Each Thana Welfare Officer has been equipped with Homeopathic and Allopathic medicines for common diseases. These medicines are distributed free to the villagers.

4. *Agriculture.*—Quite a large number of minor irrigation schemes have been taken up in the district for facilitating agriculture.

5. *Cottage Industries.*—In order to minimise pressure on the land and to improve subsidiary sources of income, the Government have been issuing loans up to a limit of Rs. 500 in each case at 4 per cent simple interest to the aboriginals who want to start

cottage industries in their homes, 70 per cent of the applications for loans for cottage industry are stated to be spent on purchase of sewing machines.

6. *Cultural Uplift.*—On the average a sum of Rs. 5,000 is spent every year in giving aid to cultural institutions such as libraries, dramatic and dancing clubs and sports clubs of the aboriginals.

It is expected that the effect of the above projects will become apparent in course of the coming few years. The State Government have set up a Tribal Research Institute at Ranchi under the guidance of trained social anthropologists. This will provide the Government with adequate objective knowledge of the socio-economic conditions of the aboriginals so that uplift projects may be guided systematically along fruitful channels.

CHAPTER XIV.

THE INDUSTRIAL LABOUR.

The district of Singhbhum has got clearly two distinct portions. The city of Jamshedpur and the areas up to Ghatsila are the main belt having some of the biggest factories of their kind in this country. The remaining areas are either agricultural or mining areas producing iron-ores and other ancillary minerals for the manufacture of iron and steel. The other important industrial activities are *biri* making at Chakradharpur and shellac manufacture at Chandil.

There are altogether 60 factories running with power and 350 factories running without power registered under the Factories Act. Besides, there are 173 factories under section 85 of the Factories Act. About 75,000 people are working in this district in registered factories. This number, however, does not include the workers employed on construction work relating to the factories. The following* is the industrial classification of some of the factories :—

Classification	No. of factories.
1. Flour, rice and *dal* mills	112
2. Non metallic mineral product	3
3. Manufacture of glass	1
4. Manufacture of cement	1
5. Ferrous metal rolling	1
6. Ferrous metal extracting and refining	1
7. Ferrous metal tube-making	1
8. Ferrous metal wire drawing	1
9. Foundry	2
10. Non-ferrous metal extracting and refining	1
11. Manufacture of metallic mineral products	1
12. Manufacture of agricultural implements	1
13. General and jobbing engineering	20
14. Manufacture of insulated wire and cable	1

* According to the latest report of the Chief Insp ctor of Factories, Bihar (June, 1958) there are 250 factories running with power, 488 factories running without power, 473 *bidi* manufactories, 47 saw-mills and 24 printing industries.

Classification.	No. of factories.
15. Manufacture and repair of rail-road equipments	2
16. Gas manufacturing and distribution	1
17. Waterworks	1
18. Sanitary services	8
19. *Biri* manufactories	343
20. Saw-mills	22
21. Manufacture of furniture	2
22. Printing, publishing and allied industries	20
23. Repair of motor vehicles	18
24. Manufacture of ice	3
25. Electric light and power	5
26. Shellac manufacture	11

The important factories in this district along with the number of workers employed in each are mentioned below :—

1. *The Tata Iron and Steel Co., Ltd., Jamshedpur.*

The factory started production in 1911 and manufactures pig iron, steel, ingots, plates, railway sleepers, wheel tyres and axles, etc. The factory is the biggest of its kind in the East and has an estimated capacity of 1 million tons per annum. Over 38,000 workmen are employed in this factory directly or through contractors. At present the factory is engaged in the expansion of its capacity raising it to 2 million tons. The extension work is being done by the Kaiser Engineers Overseas Corporation of U.S.A. About 15,000 workmen are employed under the Kaiser as well as under other contractors engaged in the extension work.

2. *Tata Engineering and Locomotives, Co., Ltd.*

The factory was started in 1921 and is engaged in the production of locomotive and boilers. Since the inception of the auto division diesel trucks are also produced. A foundry has been opened recently. The factory employs 6,892 workers.

3. *The Tinplate Company of India, Ltd.*

The factory was started in 1922 and manufactures tinplates. The number of employees is about 5,200.

4. *Indian Cable Co., Ltd., Jamshedpur.*

This factory was started in 1923 and is engaged in the production of copper wires and insulated cable for electrical purposes. It employs 1,940 workers.

5. *Indian Steel and Wire Products Co., Ltd., Jamshedpur.*

This factory was established in 1914 and manufactures rods, squares and wires, etc. The number of employees is over 2,000.

6. *Indian Tube Co., Ltd., Jamshedpur.*

The factory was started in 1954. The factory started manufacture of hot rolled tubes by heat welding process. There is a programme to expand it further to manufacture tubes which would be seamless. The factory employs about 750 workers, besides contract labour.

7. *Indian Copper Corporation Co., Ltd., Ghatsila.*

This factory was established in 1924 and manufactures copper ingots and brass sheets. The factory employs about 19,050 workers.

8. *Tatanagar Foundry Co., Ltd., Jamshedpur.*

This factory was established in 1927 and manufactures C. I. sleepers and engineering castings, etc. It has about 3,000 workers.

9. *Chaibasa Cement Works, Jhinkpani.*

This factory was established in 1947 and manufactures cement. It employs about 1,800 workers.

10. *Seraikela Glass Works, Ltd., Kandra.*

This factory was established in 1942 and manufactures sheet glass. It employs about 750 workers.

11. *Jamshedpur Engineering Machine Manufacturing Co., Ltd.*

This is an engineering concern and was established in 1934. The number of employees is about 500.

12. *Indian Hume Pipe Co., Ltd., Jamshedpur.*

It was established in 1926 and is engaged in the manufacture of hume pipes. About 200 workers are employed in this factory.

ORGANISATION AND FUNCTIONS OF TRADE UNIONS.

The city of Jamshedpur which has got one of the biggest concentration of labour force in this country has also some of the best organised unions functioning here. The names of the main

unions together with the date of their registration is given below:—

Name of the unions.	Affiliation.	Date of registration.
1. The Golmuri Tinplate Workers' Union, Golmuri.	Indian National Trade Union Congress.	1938
2. The Tata Workers' Union, Jamshedpur.	Ditto	1938
3. The Tatanagar Foundry Workers' Union, Jamshedpur.	Ditto	1939
4. Maubhandar Mazdur Union	Ditto	1942
5. Wire Products Labour Union	Ditto	1945
6. Jemco Workers' Union	Ditto	1945
7. Cable Workers' Union	Ditto	1946
8. Telco Workers' Union	Ditto	1946
9. Chaibasa Cement Workers' Union.	Revolutionary Socialist Party	1947
10. Seraikela Glass Workers' Labour Welfare Organisation, Kandra.	Independent	1948
11. Tata Mazdur Sabha, Jamshedpur	Hind Mazdur Sabha	1949
12. Hume Pipe Workers' Union	Indian National Trade Union Congress.	1949
13. Seraikela Glass Workers' Union	Ditto	1950
14. The Indoxco Labour Union	Ditto	1956
15. Tube Co. Workers' Union	Ditto	1955
16 Jamshedpur Mazdur Union	Communist Party of India	1954
17. Kaiser Engineers Workers' Union.	Ditto	1956

LABOUR MOVEMENT IN TISCO.

The Labour Movement in Tisco in Jamshedpur has a history in which men like Sri C. R. Das, Sri C.F.Andrews, Mahatma Gandhi, Sri Motilal Nehru, Sri Rajendra Prasad, Sri Subhas Chandra Bose and others had taken part at some time or other. From 1907 to 1920 the labour force in Jamshedpur had no specific organisation. The indigenous labour was chiefly drawn from among the agriculturists of the rural areas in the district and from outside but they had no experience of factories' rules and laws. The top-ranking officers were exclusively foreigners and highly skilled Indians did not go much beyond the job of a Foreman.

During the First Great World War, the prices went up very high and the labour force was affected badly. There was a wave of unrest and agitation at different places. The big strike in the Kharagpur Railway Workshop and the unfortunate happenings at Jallianwallabag in 1917 had their disturbing effect on labour force. There was a certain amount of unrest over leave, provident fund, etc., and on the 24th March, 1920, the workers from the Smith Shop and Machine Shop came out of the factory with shouts and slogans. This was the first strike in Jamshedpur and was the earliest manifestation of the workers' consciousness. Sri Byomkesh Chakravarty, a leader of the English Bar in Calcutta High Court, was approached and he deputed Messrs Suren Halder (another barrister), Padamraj Jain and Nirmal Chatterjee to Jamshedpur.

The Labour Association of Jamshedpur was formed with Sri Suren Halder as its President and this was later recognised as the representative organisation of the workers and as a result of an agreement, Service Rules and Provident Fund Schemes were drawn up and the general increase of 25 per cent pay was agreed upon. Sri Jogesh Ghosh, a chemist of the Steel Company, was the first Secretary and Sri V. J Sathe of the Drawing Office was the first Treasurer. Sri Thakkar Bappa, who was the Welfare Officer in the Welfare Department, among others collected money from Bombay to run the organisation.

But the movement was rather nebulous at this time and there was an unorganised strike for 24 days in the course of which there was a firing at Mohulbera in which 5 workers were killed and 24 were injured.

Although the strike melted away, it had brought in a general increase in wages and some beneficent rules for the workers. There was another strike in 1922 which lasted for 33 days but ended in a failure. The company withdrew its recognition of the Association and the leading members were victimised. The Trade Union Congress took interest in the labour movement in Jamshedpur and Dewan Chaman Lal, who was the President of the All-India Trade Union Congress, came to Jamshedpur and brought about a reconciliation which was, however, not very successful. Mainly because of the want of definite leadership and finance, the strike could be easily liquidated by the management.

Soon after the War, when continental steel flooded the Indian markets and the Steel Company applied for protection, the labour movement picked up a momentum. The Tariff Board investigated into the case and recommended the imposition of a tariff duty on continental steel goods as a measure to check the dumping and to do away the unfair competition. The recommendation

of the Tariff Board was placed before the Central Assembly. Mr. Sathe, the then Secretary of the Labour Association, contacted Pandit Motilal Nehru and Sri C. R. Das who were running the Swaraj Party in the Central Assembly. The Swaraj Party, because of its strength, could easily throw out the recommendations and the management wanted to stop it. The Directors contacted Pandit Motilal Nehru and proposed that a Board with Sri C. R. Das as its Chairman be formed and that the decision of the Board will be binding on the management, specially regarding the recognition of the Association. This was in 1925, some months before the death of Deshbandhu C. R. Das. The solution, however, failed as the management did not agree to the proposal of recognition so long as Mr. Sathe was the Secretary. The Tariff Bill was, however, allowed to be passed without any opposition by the Swaraj Party but soon trouble broke out again. After the fa lure of the Conciliation Board and the death of Deshbandhu C. R. Das, the leadership for some time fell on Rev. C. F. Andrews of Shanti-Niketan who had already associated himself with the labour movement of Jamshedpur. Mr. Andrews approached Mahatma Gandhi to interfere and Gandhiji came to Jamshedpur in 1925. Through the efforts of Gandhiji the constitution of the Association was re-modelled, an election was held by ballot and Rev. C. F. Andrews became the President of the Association. Messrs D. C. Gupta and D. C. Ahuja representing the management became the Vice-Presidents.

But the strike-fever had spread its contagion. In 1928, there was a strike of the crane drivers but through the efforts of Rev. Andrews a settlement was made under which the salary of the crane drivers was increased and arrangement for the payment of bonus was effected. There was another strike in the Traffic Department and again through the efforts of Rev. Andrews some payments were made to the workers. But these two strikes were organised without the consent of the Association. In order to check the growing unrest Rev. Andrews held discussion with the General Manager and the General Bonus Scheme was introduced. This was the first time that the management and the Association sat together and agreed to a beneficial scheme. The scheme was, however, made applicable to the workers within the factory. But even the Bonus Scheme could not stop the wave of unrest and soon after there was a strike in the Boiler Department and Sheet Mills. These strikes being sponsored independently put the Labour Association to a certain amount of embarrassment. At this stage Mr. Manek Homi, a lawyer of Jamshedpur, contacted a portion of strikers and led the strike for some time. By this time Rev. Andrews had left India requesting Shri Subhas Chandra Bose to take charge of the Association. At first Shri Subhas Chandra Bose did not agree on the ground that he had no idea of the labour field.

In the meanwhile strikes had become a common feature in Jamshedpur in spite of the efforts of Mr. N. M. Joshi, the then General Secretary of the All-India Trade Union Congress, who stayed in Jamshedpur for sometime to tackle the situation. Mr. N. M. Joshi advised against the *hartal* organised by Mr. Manek Homi but could not liquidate the strike. At this juncture Shri Subhas Chandra Bose came to Jamshedpur in 1928. At first he advised the workers to continue the strike and he did not support the activities of the Association. The strike had entered into a new phase and after 2½ months there was complete strike in the factory. Some Directors came to Jamshedpur and opened negotiations with Shri Bose but they refused to do anything with Mr. Homi. Mr. Homi went against Shri Bose when the latter thought that the strike should not be continued. Shri Subhas Chandra Bose called off the strike and brought about a settlement but unfortunately the split remained and Mr. Homi founded another Labour Association in the name of the Labour Federation.

At this time in 1928 Shri Subhas Chandra Bose was elected as the President of All-India Trade Union Congress and a conference was held at Jamshedpur. In the meeting hooliganism broke out and in an open meeting brickbats were thrown at Shri Subhas Chandra Bose and other leaders. The meeting had to be closed completely and cordoned off by the cavalry and the military force.

For some time the labour force remained divided into two rival Associations. On April 19 1929, there was a strike by the Tinplate workers. The workers formed a union with Mr. Daud as its President. But Mr. Daud was turned out and Mr. Homi became the President with Mr. Michael John as Secretary. The workers ultimately chose Shri Subhas Chandra Bose as its President. The Tinplate strike had assumed great importance and Dr. Rajendra Prasad, Pandit Jawaharlal Nehru and Shri V.V. Giri had to come to Jamshedpur in this connection. An adjournment motion was passed in the Bihar Council and in the Central Assembly. Pandit Motilal Nehru took steps to successfully move the motion to call off the tariff privileges to the company. The General Secretary of the Trade Union Congress was in England at that time and he raised this issue before the Secretary of States through the British Trade Union Congress.

Prof. Abdul Bari came to prominence in course of this strike and held a meeting to help the strikers. Mr. Homi opposed the move of the Jamshedpur Congress and the Labour Association to hoist the National Flag on the 26th January, 1930, with the swearing in of the Independence Pledge. This move of Mr. Homi was completely foiled and his leadership suffered a severe set back.

Shri Subhas Chandra Bose continued to be the President of the Association for some time more but the Association was facing a financial crisis as the company did not allow the deduction from the salary bill as was done before. Mr. Michael John was elected as the General Secretary and has since continued to be associated prominently with the labour movement.

From 1930 when the Civil Disobedience Movement was started by Mahatma Gandhi, there were cross currents in the labour movement in Jamshedpur, as a result of which the workers suffered much. After the imprisonment of Shri Subhas Chandra Bose, the Association passed through a crisis and for some time another organisation, known as Jamshedpur Metal Workers' Union, was started. A few workers like Messrs Michael John, M. K. Ghose and others kept the Association going and Shri Subhas Chandra Bose used to advise them from Vienna at times.

In 1937 there was trouble again in the Sheet Mill and the Association approached Dr. Rajendra Prasad, as a result of which Dr. Rajendra Prasad and Prof. Abdul Bari came to Jamshedpur. The movement was revived by Prof. Abdul Bari and Mr. Michael John from 1938. The name of the Labour Association was changed into Tata Workers' Union of which Prof. Bari was the President and Mr. Michael John was made the General Secretary. There was a certain amount of misunderstanding between the management and the union regarding the increase of the Sheet Mill shifts and other matters. The matter came to such a stage that it was apprehended that at any moment there could be another big strike. Shri Subhas Chandra Bose, who was then the President of the Indian National Congress, was approached by both the parties and it was decided that a committee should be formed with Shri Subhas Chandra Bose, Sir Dalal and Prof. Abdul Bari and their decision would have a binding effect on both the parties The other points of dispute were to be settled in terms of the findings of the report of the Bihar Labour Committee which was formed by Prof. Bari, the then Deputy Speaker in the Bihar Legislative Assembly under the Chairmanship of Dr. Rajendra Prasad. The draft settlement was made out in the presence of Shri Subhas Chandra Bose and was confirmed by Dr. Srikrishna Sinha, the then Premier of Bihar and the strike menace was averted. The recommendations of the Bihar Labour Enquiry Committee, however, could not be implemented due to the resignation of the Congress Ministry in 1939 and launching of individual *Satyagraha* in 1941.

The labour movement in Jamshedpur and the surrounding places got a fresh impetus under the leadership of Prof. Abdul Bari. There were strikes in the Tinplate, Cable Co., and Indian Copper Corporation at Musabani and Maubhandar. Almost all these strikes ended after the Conciliation Boards were formed.

The awards were mostly in favour of the workers. Prof. Abdul Bari in 1938 also became the President of the District Congress Committee and Shri M. K. Ghosh its General Secretary and in this way the labour organisation and the local Congress were linked up.

In 1938, Prof. Abdul Bari threatened a strike on the issue of the Profit-Sharing Scheme. The Profit-Sharing Scheme was more or less tied to the share-holders' dividend and not to the net profit. The Union demanded that it must be calculated on the basis of the net profit. When Prof. Bari threatened a strike Dr. Rajendra Prasad and the Provincial Ministry intervened. The management increased the bonus from 3 to 3½ months' salary. This led to a good deal of agitation in the other factories and the Government appointed a Conciliation Board with Justice Sir Khwaja Muhammed Noor as the President and Shri S. K. Das, I. C. S., as the Secretary. The bonus issue and some other issues were also referred to the Conciliation Board. The Board revised the dearness allowance rates and made certain other recommendations. For the time being there was a lull but other issues developed. It is in this year that the union was registered.

The Congress Ministry in the Province resigned in 1939 and with the starting of individual *Satyagraha* Mr. John and a few others were arrested. During Mr. John's absence there was again unrest over the Profit-Sharing Scheme issue but there was a slackening in the labour movement. Mr. John came out of jail in 1942 and the Union took up the issue of War Risk Allowance. The company took a conciliatory attitude not to affect their war produce and introduced the War Insurance Scheme. With the Quit India" resolution before the All-India Congress Committee on August 8, 1942 and the arrest of Mahatma Gandhi and other members of the Congress Working Committee there was a *hartal* on August 10, 1942 and a great unrest. It was decided that there should be a big strike from the night of August 20 but before the plan finalised the main leaders of the Labour Union, namely, Messrs Michael John, Treta Singh, Narayan Mukherji, T. P. Sinha, M. K. Ghosh, etc., were arrested on August 15 and were immediately sent to the Central Jail of Hazaribagh. But the strike took place. The strike at the works, however, slowly melted away by the month of September, 1942.

Prof. Abdul Bari was released in 1945 and he set himself to the task of reorganising the Labour Union. In 1945, the Union gave a strike notice for the fulfilment of various demands such as revision of grades, scientific wage structure, revision of profit-sharing bonus, performance bonus scheme, promotion procedure, housing, etc. As the Union had rallied the workers by then, the company came to terms and the Tata-Bari agreement was drawn up after collective bargaining in 1946.

The new wage structure was drawn up. The various schemes for bonus, increases in dearness allowance and food rebate were achieved. Joint Negotiation Committee, equally represented by the management and the union to tackle the main problem, was formed and this has helped improve good industrial relations.

After the death of Prof. Abdul Bari in 1947, Mr. Michael John became the President of the Union. The Union now claims 80 per cent workers as its members and this includes the workers inside and outside the factories and also those who work in offices. The membership-fee amounts to 1½ days' basic wages per year collected in 3 instalments inside the works on pay days. The Union holds *basti* meetings and mass meetings occasionally to acquaint the workers of the existing situation and also with steps taken to fulfil the demands of the workers as well as their results.

The Tata Workers' Union* is affiliated to the Indian National Trade Union Congress. The Union is trying for 100 per cent membership by persuasion. There is a library and a study circle. The Union is building up a Building Fund to erect its own building.

The Union by continuous efforts has secured higher wage structure and now there is a permanent Joint Rates Committee to enquire into any application coming up from time to time. The dearness allowance scales and food rebates have also been secured by the Union through mutual efforts. After the 1951 Agreement the food rebates have been extended to all employees with a basic wage up to Rs. 250. Before 1945, profit-sharing bonus used to depend upon the dividend declared. But after the Agreement of 1946, the workers got 22½ per cent of annual net profit as their share of the profits. In 1949, the scheme was further revised due to the Union's demand and the share of the workers was increased from 22½ per cent to 27½ per cent of the net profit. The Union took up this issue again and in the year 1953, the rate was increased to 30 per cent. Similarly better terms have been obtained for the workers under Performance Bonus, Maintenance Bonus, Attendance Bonus and Service Bonus Schemes. In 1951 the whole bonus scheme had to be modified due to the demands of the Union. The Union has also taken up and obtained better terms so far as the provident fund, gratuity, maternity, medical, accident, education, quarters, promotion, employment and over-time are concerned.

It is interesting to mention regarding the organisational set up of the Union. There is a President with four Vice-Presidents, one General Secretary helped by three Assistant Secretaries and

* Although of recent origin the Majdur Union affiliated to A. I. T. U. C. has now claimed to be a strong rival of the I. N. T. U. C.-sponsored Union. The Majdur Union sponsored a one day's strike in Jamshedpur on 12th May 1958.

one Treasurer and Accountant. The Executive Committee members are 177, out of which about 15 are co-opted and the rest are elected from different departments. The Executive Committee is selected once in two years by the members of the Union. The Executive Committee meets not less than once in a month. There are various committees for negotiations through which the Union works. Under the Central Works Committee there are Works Committee, Permanent Joint Rates Committee, Trade Test Specification Committee, Safety Appliances Committee, Education Committee, Canteen Committee, Quarters Committee and Medical Committee.

REVISED PROFIT-SHARING SCHEME.

Among the beneficent measures that have been brought in by mutual efforts of the management and the Tata Workers' Union, particular mention may be made of some. A revised Profit-Sharing Scheme was brought into force from 1st April, 1952 and was held to be in operation for a period of five years ending 31st March, 1957. This scheme terminated the previous Profit-Sharing Scheme dated 31st August, 1949 and its supplemental memorandum dated 22nd May 1951. The revised Profit-Sharing Scheme was much more beneficial to the workers. In respect of the profit for the year ending 31st March, 1953, the company agreed to pay a sum of Rs. 1,06,50,000 as profit-sharing bonus to be credited to and/or distributed among the employees in proportion to their monthly wages as calculated on the basic wages of such employees as on 31st March, 1953. In respect of the profits for the remaining four years ending 31st March, 1957, the employees of the company were entitled under the Profit-Sharing Scheme to a share of 30 per cent of the annual net profit of the company. In the schedule, the meaning of the annual net profit was described in detail. Only the employees who have been in the continuous employment of the company for a minimum period of 12 months were entitled to any profit-sharing bonus under the scheme 75 per cent of the profit-sharing bonus payable to each employee was to be paid immediately the bonus became due and the balance of 25 per cent was to be credited to an account and maintained along with the account of the workers' provident fund in cases of employees who were members of such fund and along with the revised provident fund in cases of employees who were members of such revised fund and in a separate account in cases of employees who were not members of either funds. The funds in such accounts were to be invested in accordance with the rules framed for the purpose. The accumulated balance to the credit of an employee in such account inclusive of interest was to be paid to the employee when he ceased to be in the service of the company. The schedule in the working of the revised Profit-Sharing Scheme was signed on 21st August, 1953, by the President of the Tata Workers' Union and the Chairman, Tata Iron and Steel Co., Ltd.

SICKNESS FUND.

A fund has been created, known as Sickness Fund, with the object of giving financial relief to the members of the Tata Workers' Union in case of sickness. The fund is drawn from the general fund of the Tata Workers' Union and any employee of the Tisco who has been a regular standing member of the Tata Workers' Union for the past three years, from the date of his application for relief, shall be entitled to receive the benefit of the fund.

GRADE SYSTEM.

The structure of wages and bonuses previoulsy existing was replaced by a new structure in 1946, consisting of three main elements, namely, basic wages, good attendance bonus and performance bonus.

LABOUR'S PARTNERSHIP.

This has been extended by direct participation into the management of the department concerned. A number of joint committees of management and men with the representatives of the Trade Unions also advise the company on the various aspects of management-employee relations and the conduct of employee services, such as safety, canteen, creches and other welfare services. There are, further, two committees to discuss the day-to-day grievances of the men, one for employees within the works and one for employees in the town.

JOINT RATES COMMITTEE.

A permanent Joint Rates Committee consisting of two representatives of the Union and two representatives of the Company and the Director of Personnel as its Chairman has been set up for the purpose of reviewing from time to time the cases brought before it by the Union regarding changes in designation and changes in the rating of jobs.

LABOUR UNIONS FOR CONCERNS OTHER THAN TISCO.

Out of all the seventeen registered Labour Unions there are only six Unions of some importance besides the Tata Workers' Union which has already been described earlier. These six Unions are the Golmuri Tinplate Workers' Union, Wire Products Labour Union, Indian Cable Workers' Union, Tatanagar Foundry Workers' Union, Telco Workers' Union and Maubhandar Mazdur Union. A short note on each of these is given below :—

1. *The Golmuri Tinplate Workers' Union.*

In 1928, the workers formed themselves into a union and started agitating to secure improvement in their working conditions. There was a strike in 1929, which continued for eleven months and several workers were discharged as a result of the strike. The Union was reorganised in 1937 under the leadership of late Prof. A Bari. It became a registered union in the year

1938. The Union received a set back in 1942 when its leaders were imprisoned. After the death of Professor Bari in 1947, Mr. M. John became the President of the Union.

The Union is affiliated to the Indian National Trade Union Congress. It is the sole bargaining agency to negotiate on behalf of the workers It has secured various improvements in the wage structure and the working conditions of the workers.

2. *Wire Products Labour Union.*

The Union was formed towards the end of 1945 and was registered in the same year. It was organised by the I.N.T.U.C. but later in 1948 its leadership passed into the hands of the Socialist Party. A strike was launched in the year 1949 which ultimately failed. There was a void for a few years and in 1952 the I.N.T.U.C. again captured its leadership. The Union has been recognised by the employer.

3. *Indian Cable Workers' Union.*

This Union was registered in the year 1946 and was affiliated to the I.N T.U.C. However, this affiliation was withdrawn in December, 1953, temporarily which has now been resumed.

4. *Tatanagar Foundry Workers' Union.*

The Union was formed in the year 1938 with late Professor Bari as its President. It was registered in the year 1939. It launched a strike in the same year when it was organised, which ultimately failed. However, a Board of Reconciliation was formed in the same year which brought about a settlement. The Union is functioning since then smoothly and has secured several amenities for the workers.

5. *Telco Workers' Union.*

The Union was organised in the year 1946 and was registered in the same year. It was under the leadership of the Communist Party, but was captured by the I.N.T.U.C. in the year 1948. Since then it is running under the I.N.T.U.C. with Mr. M. John as its President.

6. *Maubhandar Mazdur Union.*

The Union was organised in the year 1942 and was registered in the same year. It has been functioning successfully since then under the I.N.T.U.C. Formerly the Union at the factory as well as at the Musabani mines had common leadership of Mr. M. John. But in 1953 as a result of rivalry the group of Mr. John had to make over the leadership at the Musabani mines to another group inside the Congress.

In addition to the unions which have already been described above, there are 10 more registered unions in the district, names of which have already been mentioned earlier. These unions are not yet of much importance and a few of them have already become practically defunct.

Welfare Facilities provided by the Factories.

Welfare facilities on varying scales have been provided by the employers. Canteens and creches exist wherever required under the Factories Act. The Tisco Works Canteen sells about 6,000 meals and 16,000 cups of tea every day. The Telco Works Canteen is one of the best of its kind in this State.

The Tisco, which by historical reasons is maintaining the Health and Municipal Services in the city, is also running a number of schools for education of the employees' children. Schools are also maintained by the other factories. The Tisco also runs community centres for recreational and cultural facilities. The centre at Sonary is also giving some vocational training. There is a net work of radio installation in the city for entertainment and education purposes. Free cinema shows are also given.

The medical facilities in Jamshedpur are being administered by the factories. The Tisco Main Hospital which has 420 beds is one of the best maintained hospitals in this State. The Jamshedpur Co-operative Store is the biggest organisation of its kind in this State.

Industrial Housing.

A survey of industrial housing was conducted by the Labour Department in the year 1955-56 in which 39,074 workers, as defined in the Factories Act, were covered. These workers belonged to the factories concentrated in Jamshedpur. The workers were divided into ten wage groups. A table is given below to show the wage groups in which the workers were divided :—

(*i*) Those getting up to Rs. 100.
(*ii*) Those getting between Rs. 101 to Rs. 150.
(*iii*) Those ditto Rs. 151 to Rs. 200.
(*iv*) Those ditto Rs. 201 to Rs. 250.
(*v*) Those ditto Rs. 251 to Rs. 300.
(*vi*) Those ditto Rs. 301 to Rs. 350.
(*vii*) Those ditto Rs. 351 to Rs. 400.
(*viii*) Those ditto Rs. 401 to Rs. 450.
(*ix*) Those ditto Rs. 451 to Rs. 500.
(*x*) Those getting above Rs. 500.

Another table is given below to show the number of workers under each wage group in the different factories in Jamshedpur :—

Group.	Tisco.	Tolco.	Tinplate.	ISWP.	Cable Co.	Tata-nagar Foundry.	Jemco.	Hume Pipe.	Total.
1	2	3	4	5	6	7	8	9	10
I	3,057	2,732	907	1,311	600	1,459	309	79	10,454
II	8,485	1,017	1,784	378	343	363	63	7	12,440
III	6,222	243	933	262	172	13	6	0	7,851
IV	3,173	180	375	80	47	6	2	0	3,863
V	1,533	57	88	26	16	7	3	0	1,730
VI	687	34	43	10	7	3	2	0	786
VII	347	28	41	12	13	6	3	0	450
VIII	288	15	52	6	3	0	0	0	366
IX	107	7	9	3	3	1	0	0	220
X	741	94	68	Nil	8	3	0	0	914
Total	24,730	4,407	4,300	2,088	1,214	1,861	388	86	39,074

The survey revealed that out of 1,954 sampled workers only 34·03 per cent were found living in the employer's houses. The rest were either staying in their own houses or with friends and relations or in rented houses. The table given below in which only permanent factory workers have been considered will explain the position :

	Living in own houses.		Living in Employer's houses		Living in rented houses.		Living with friends and relatives.		
Group.	No. of workers	Percentage of total samples collected.	No. of workers.	Percentage of total samples collected.	No. of workers.	Percentage of total samples collected.	No. of workers.	Percentage of total samples collected.	Total samples collected.
1	2	3	4	5	6	7	8	9	10
I	188	35.9	78	14.9	113	21.6	144	27.5	523
II	211	31 9	120	19.3	122	19.7	168	27.1	621
III	93	23.7	170	43 4	52	13.3	77	19.6	392
IV	32	16 6	123	63.7	10	5.2	28	14.5	193
V	12	13.8	66	75.0	4	4.6	5	5.7	87
VI	5	12 8	27	60·2	2	5.1	5	12.8	39
VII	2	8.7	18	78.3	2	8.7	1	4.3	23
VIII	0	0	17	24.4	1	5.6	0	0	18
IX	1	8.3	8	66.7	0	0	3	25.0	12
X	2	4.3	38	82.6	4	8.7	2	4.3	46
Total	546	27.0	665	34.03	310	15.9	433	22.2	1,954

The result of the survey indicated that there was a demand of 24,000 houses for workers in Jamshedpur (1955-56).

WELFARE CENTRES.

There are several welfare centres in the district for the benefit of workers run either exclusively by the Government or on the employers' and workers' contributions.

The only welfare centre run by the Labour Department of the State Government is known as Shram Kalyan Kendra and is situated in the city of Jamshedpur. Recreational and cultural facilities are provided here to the workers and their dependants. Education in sewing, knitting, embroidery and fine arts is also imparted here. The centre has also got a film projector of 16 M.M. and a propaganda-*cum*-health van. Facilities for indoor and outdoor games also exist here. Another similar welfare centre is to be opened at Chakradharpur for which sanction has already been given. There is no welfare centre run by the Central Government.

The welfare centres run on the contributions of the employers and labourers are situated at Maubhandar, Jhinkpani, Chakradharpur, Kandra and Baharagora and there are libraries for the benefit of workers at Mango and Dhatkidih. These are called voluntary labour welfare centres and get occasional grants in cash or kinds from the Labour Department.

Canteen and creches are maintained as provided under the Factory Act and the Mines Act.

A Model Labour Welfare Centre was set up by the State Government during the First Five-Year Plan period at Jamshedpur. It has also been decided under the scheme entitled "Industrial Health Service" to set up Health Propaganda Unit and Maternity and Child Welfare Centre at Jamshedpur. For this purpose, it is proposed to construct an annexe to the Labour Welfare Centre Building at Jamshedpur for accommodating this unit and centre.

WORKERS IN SHOPS AND ESTABLISHMENTS.

From 15th February 1955, the State Government enforced the B ha · Shops and Establishments Act in Jamshedpur which grants adequate protection to the un-organised workers employed in shops, commercial establishments, hotels, cinema houses, etc.

There are 2,171 shops and establishments registered under the Bihar Shops and Establishments Act, 1953, in the city of Jamshedpur. Approximately 38,000 workers are covered under this Act in Jamshedpur. The Act regulates working conditions, period of payments, deductions of wages and refusal of leave by the employers of the shops and establishments. This Act has also been enforced in Chaibasa town from 1st April, 1957. The enforcement of the Act is the responsibility of the Labour Officer, Chaibasa. So far 583 Establishments have applied for registration.

MINIMUM WAGES ACT.

The Minimum Wages Act was enacted in the year 1948. Under this Act the State Government have fixed a sum of one rupee and four annas for different categories of workers falling under the following operations:—

Roads and Buildings Construction.

Employment in any woollen, carpet making, shawl weaving establishments.

Employment in any rice mill, flour mill or *dal* mill.

Employment in any tobacco (including *biri* making) manufactory.

Employment in any plantation, that is to say, any estate which is maintained for the purpose of growing cinchona, rubber, tea or coffee.

Employment in any oil mill.

Employment under any local authority.

Employment in stone breaking and stone crushing.

Employment in any lac manufactory.

Employment in any mica works.

Employment in any public motor transport.

Employment in tanneries and leather manufactory.

Under the same Act, minimum wage in agriculture has also been fixed for the district of Singhbhum. The minimum wages fixed are 3 seers of paddy plus 4 chattacks of rice or *murhi* (fried rice) or *chura* or the cash value thereof.

The progress towards the enforcement of the Bihar Shops and Establishments Act, Minimum Wages Act and Weekly Holidays Act has been satisfactory.

INDEBTEDNESS AMONG LABOURERS.

The incidence of indebtedness amongst workers in Jamshedpur has also been studied by a field survey conducted by the Labour Department. The total number of factory workers in debt, who are working in 10 of the bigger factories at Jamshedpur, is estimated at 36,686. At the end of the quarter ending in March, 1957, the volume of indebtedness is estimated at Rs. 3,56,29,540 on the basis of an average debt of Rs. 971.21 per family. This is no a very encouraging picture.

COMPULSORY PROVIDENT FUND SCHEME.

Till 1952, there was no compulsion for the employers to maintain a provident fund. Since November, 1952, the Employees Provident Fund Act, 1952, came into effect. This Act covered

only six industries, namely, cement, cigarette, engineering (chemical, mechanical and general), iron and steel, paper and textile. Thirteen more industries were brought under the purview of this Act with effect from the 31st July, 1956, and this was further supplemented with a list of four industries with effect from the 30th September, 1956.

There being provision in the Act for exemption of individual factories as well as individual employees from the Statutory Scheme, provided the factory concerned had a Provident Fund Scheme of its own, at least as favourable to employees as the Statutory Scheme, most of the bigger factories in the Singhbhum district applied for exemption which was granted provisionally. In one case, although the factory concerned did not apply for exemption, all qualified employees opted *en masse*, separately and individually, for the factory scheme. These applications were all granted on the factory giving an assurance to the Provident Fund organisation that the total contributions to be deducted from the pay of each such employee would in no case be less than those laid down under the Statutory Scheme.

So far as the working of this scheme in the district of Singhbhum is concerned the table below explains the present position:*—

Serial no.	Name of factory.	Number of Employees covered by Statutory Scheme.
1	The Tata Iron and Steel Co., Ltd., Jamshedpur	36,753
2	Indian Copper Corporation, Ltd. (inclusive of Copper Mines at Musabani), Ghatsila.	6,637
3	Tata Locomotive and Engineering Co., Ltd., Jamshedpur	5,185
4	The Tinplate Co. of India, Ltd., Jamshedpur	4,353
5	Tatanagar Foundry Co., Ltd., Jamshedpur	2,912
6	The Associated Cement Co., Ltd., Jhinkpani Works	2,109
7	The Indian Steel and Wire Products, Ltd., Jamshedpur	1,989
8	The Indian Cable Co., Ltd., Jamshedpur	1,735
9	Seraikela Glass Works, Ltd., Kandra	541
10	Jamshedpur Engineering and Machine Manufacturing Co., Ltd.. Jamshedpur.	447
11	The Indian Hume Pipe Co., Ltd., Jamshedpur.	106
12	Commercial Stationery Mart and Printing Works, Jamshedpur.	82
13	Bharat Manufacturing and Engineering Co., Chakulia	75
14	Dhalbhum Trades and Industries, Ltd., Ghatsila	50
	Total ..	62,974

*The statistics are of 1956 (P. C. R. C.).

General Review.

The industrial population is concentrated in Jamshedpur. From the beginning the industrial labour in Jamshedpur and outside had taken steps to be organised. It may be said that the industrial labour of the district is fairly well organised now, although beset between different labour unions with affiliations to varying political groups.

In the last ten years there have been several important Acts at the all-India level and they have improved the condition of the industrial workers. One of the first steps towards improving the working condition of labour has been the amendment of the Factories Act of 1954. The amended Act has provision ensuring safety, health and welfare of those employed in factories. It has provided for benefits to the workers in the form of reduced working hours per week, holidays with pay and increased stability of service. It is true that all the measures contemplated by the amended Act have not yet been fully implemented. Strengthening of inspection services and a better co-ordination between the employees and employers would lead to the better implementation of the provisions of the Act.

Along with the other major industrial centres in India, Jamshedpur and the other industrial centres in the district have had recently a number of unfortunate clash of interests and disputes between labour and capital. Both have led to a depressing production in industry. For our purposes it would be enough to mention that a colossal number of man-days have been lost as a result of such disputes. All this indicates a rather unhappy position and suggests the desirability of bringing in better relationship between Capital, Labour and State. The system of collective bargaining, mutually co-operating boards, impartial legal machinery for conciliation and compulsory adjudication is very much indicated and such definite trends would bring in a proper working of the existing Act *

In a number of industries in this district there have been some good results achieved through collective bargaining due to well organised labour and strong trade unions. In Jamshedpur, Tata Iron and Steel Company, Ltd., has entered into an agreement with workers in respect of vital questions like increase of wage for low paid employees and gradual participation of labour in management committees. In some other industries rudimentary attempts have been made with the same view but unfortunately due to the division of the industrial workers of the same

*After this section was written out there has been an unfortunate tension between the A. I. T. U. C.-sponsored Majdur Union with the I. N. T. U. C.-sponsored Union in 1957 culminating in strikes on 12th May 1958, leading to various repercussions. Both the unions claim the majority of the workers in Tisco. (P. C. R. C.).

concern between rival unions there has not been a satisfactory achievement.

The Industrial Disputes Act promulgated in 1947, has its objective in conciliation and setting up an adjudication machinery. The Act has since been amended to make it more effective in resolving conflicts in industry. Provision for setting up Labour Courts and Tribunals and settling industrial disputes through them has not only acted as a necessary cushion to absorb their immediate warring spirits but has also led to a satisfactory settlement of the points of disputes. Causes of disputes referred to Tribunals have resulted in a majority of awards to increased wages, bonus and reinstatement of dismissed persons. The labour in spite of a strong sense of trade unionism has been rather slow in taking advantage of the provisions of this Act. It may, probably, be pertinent to observe that the benefit to labour would be more if there were no delay in referring disputes to Industrial Tribunals. The allergy of the labour to the Industrial Disputes Act probably lies in the fact that under this Act it depends solely on the discretion of Government authorities whether to refer the dispute to Industrial Tribunal or not and if it is to be referred, to whom to do it. Labour thinks that no labour Court and Tribunal are expected to be held expeditiously and awards submitted as quickly as possible. The other difficulty is in implementing the recommendations and there is a good deal of responsibility in this matter on the management and the State. For non-compliance with the terms of settlement the amended Industrial Disputes Act provides for both fine and imprisonment but the penalty clause with regard to imprisonment will not be enforceable through any Court unless the complaint is lodged by the appropriate Government authority. Labour looks askance at this special prerogative.

It may, however, be said that in spite of a considerable rise in the wage rate, the increase in wages is not considered by the labour to be quite proportionate with the increase in production. Treating India as a whole and taking 1939 as the base year, it is understood that the index of industrial production rose to 153.6 in 1954. In that period the index of gross labour earnings have moved from 100 to 381. But on the basis of cost of living for the working class the index of real income of labour rose from 100 to 102.7 only. These rates of increment for India as a whole are broadly applicable to the industrial labour in Singhbhum district but it may generally be stated that in spite of some tangible improvement in the standard of living there is yet to be a more considerable increase in the real income for them. This argument is strengthened by the fact that generally the industrial workers have been able to upgrade production, excepting in periods of depression and stress. The rise in wages

has not been commensurate with the rise in productivity. While the rise in the real labour earning has been near about 14 per cent the rise in productivity has been of the order of 40 per cent. Trade Unionists argue that with the upgrading of production the pattern of distribution of the industrial income has changed adversely for the industrial workers. The share of wages and salaries in the incomes from factories declined from 42 per cent. in 1950 to 33 per cent in 1954 while the share of profits, including dividends, interest and taxes went up from 58 per cent. to 67 per cent in the same period. These are broad calculations for the country as a whole but they are applicable to the industrial labour in the industries here. That is why labour feels that their demand for fair wages and reasonable bonus may be frustrated to a great extent. This drift has to be stopped.

A high power wage board may have proved helpful for examining and revising the wage structure for the steel and allied industries just as a wage board has been constituted by the Government for the cotton textile industries.

A share of profit is now given to labour in steel and some other industries in this district. A committee had been set up by the Government of India in 1948 for considering the question of profit sharing in industry. The recommendations of that committee have not yet been implemented.

There is also a great scope for formulating social security schemes for the benefit of the industrial labour. There is just a beginning in India of such social security measures which are common in advanced countries like U. K. and the U. S. A. The Employees' State Insurance Act of 1948 provides for certain benefits to labour in times of sickness and disablement. The Employees' Provident Fund Scheme is also another wholesome measure. There have not yet been any steps taken for paying due compensation or doles to workers in times of forced unemployment and providing for an allowance in old age.

In consideration of the fact that Singhbhum district is probably one of the richest districts in India for mineral resources, which have to be exploited, it is very necessary that there should be a better relationship between the labour and the capital and a more co-ordinated industrial peace. It may be remembered that though India is second only to Brazil in the possession of the world's largest reserve of high grade iron-ore her output constitutes only 2 per cent of the total world's production as compared to U. S. A.'s 43 per cent and U. S. S. R.'s 18 per cent. This belt has to play a very important role in the near future for steel industry in India

The labour has to play a role of increasing importance in the near future. At the present it may be mentioned that the industries in the district give employment to about 40,000 labourers.

People belonging to neighbouring localities supply about 85%, people belonging to the other districts of Bihar about 2%, people from outside the State particularly from Madhya Pradesh supply 5%, people from Orissa 5%, and people from other different provinces 3%, of the total labour population. The employers complain of a lower standard of efficiency of local labourers in comparison to the outside labourers. Minimum wages have been prescribed in respect of certain categories of work only. Lately there has been quick formation of a number of other trade unions and report from the Labour Office in June, 1958, gives a list of 33 trade unions some of which have already been mentioned before. Trade unions should try to bring about an understanding between themselves. Probably one union for one industry will be more conductive to a better relationship between the management and the labour. Trade unionism should be dignified, clean and constructive.

This last strike of 12th May, 1958 had brought in acts of hooliganism and the military had to be brought in after the management issued "Pink Cards" and "stay-in" tactics was adopted by the workers. A portion of one market, some motor vehicles and some of the buildings of the State Administration and the Tatas were damaged. Ample arrangement of police and military had been made and once the peace-loving citizens understood that there was protection the situation started improving. The plants that were completely shut down started working For a few days hundreds of Tata's highly paid officers had to be within the factory for 24 hours and had to see to the running of all the most essential sections.

According to the management India lost about 45,000 tons of steel worth more than Rs. 2.7 crores in the strike. The workers lost 3,35,000 man-days and Rs. 24.23 lakhs in wages. The loss of property amounted to over 11 lakhs in the disturbance that came in the wake of the strike.

CHAPTER XV.

JAMSHEDPUR.

THE BACKGROUND.

The area where the present steel city of Jamshedpur is situated was no better than a few straggling villages in the lap of thick forests The river which used to become a meandering stream in the summer gave sufficient water to the villagers. They eked out an existence by raising some crops and largely depended on the forest fauna and flora. The villages had a large number of blacksmiths. There was a certain amount of knowledge of the local ores This knowledge was handed over from generation to generation. The ancient *Saraks* (a class of Jains) had been the earliest known smelters of copper and iron-ore. Ancient excavations had been discovered in every conceivable situation of Singhbhum district, at the tops of the hills, inside the valleys, in the midst of almost unapproachable jungles and even in the middle of cultivation.

The early British relations with Singhbhum were entirely for military purposes. The district of Midnapore had been ceded to the British in 1760 and great difficulty was being experienced in reducing the chiefs of the hilly country on the borders of Midnapur and stopping their predatory raids. In 1767 a small British force marched against the Raja of Dhalbhum. The Raja was captured and his nephew was set up. These expeditions against Dhalbhum brought the British into contact with the Raja of Porahat. The Raja of Porahat invited the Company to put his territory into order and agreed to pay them an annual revenue. The area was reconnoitred on behalf of the Company in 1768. After the Raja of Porahat, the Company's Agent naturally turned to the other chiefs like the Raja of Mayurbhanj, Thakur of Kharsawan, Kunwar of Seraikela, etc. In 1820 the Raja of Porahat acknowledged himself a feudatory of the British. Then followed the Kol rebellion of 1831 along with the Bhumij rebellion in Manbhum of 1832 which resulted in wide activities of the Ramgarh Battalion on behalf of the British. The *Larka Kols* or Hos were brought under the immediate control of the British Government. An administrative unit was set up in Singhbhum. Lt. Tickell was posted as the first British Administrator at Chaibasa in 1837.

It is to some of the men of the Ramgarh Battalion that we owe the earlier data that made laying of roads, surveys and preparation of maps possible. Tickell was a remarkable man and within a short period of his stay he gave us a good account of the mineral possibilities, customs and manners and notes on the dialects This article of Tickell was published in the Journal of Royal Asiatic Society of Bengal in 1840.

Jacob Camac, commanding in Chotanagpur was a distinguished geographer. By this time Rennel had been appointed the first Surveyor-General, one of the remarkable decisions of Clive before he left India. Two of the other earliest Surveyors were Lt. Fannell who died whilst on the survey (1776) and Ensign Pringle.

Camac had early realised the importance of a correct map of the area. He suggested to the council at Patna for a survey through Chotanagpur and Palamau (1771). This request was implemented. While submitting maps in 1774 Rennel had acknowledged sketches made by Camac. Rennel mentioned that Camac during his command on the western frontier had made enquiries concerning routes and other geographical data. Captain Thomas Cartier, a relative of Lady Clive, had also made very valuable geographical sketch of Chotanagpur. Cartier was one of Rennel's valuable assistants. As a result of their efforts "a map of Ramgarh, Palamau, Chotanagpur, Toree and Kundah" could be published by Rennel (1772—74).

From 1801 onwards the officers of the Ramgarh Battalion went on doing excellent work in carrying out surveys through Singhbhum and Chotanagpur which was comparatively still unknown. When the Maratha war of 1803 led to the occupation of Sambalpur, William Cartwright made a survey of the route of the Ramgarh Battalion from Hazaribagh to Sambalpur. He was helped by a young lad John Selay (23). Another military geographer was Smyth in 1813 working in the neighbouring area. In 1813 when he was called away to military duty Raper was appointed in his place. The conditions under which they had to work may be imagined if we could quote *in extenso* from Smyth's memoirs where he mentions that his *sipahis*, *kedmudghars*, *dobees*, *syces*, cooks, bearers and *khalasis* were all down with raging fever and "amongst these there is not one man but who must be carried in a litter." The importance of their work at a time when most of the modern instruments were unknown cannot be over-emphasised.

Colonel Phillimore in his monumental work on "Survey of India—Historical Records" has mentioned that the officers of the Ramgarh Battalion continued their interest in surveying Chotanagpur in the second decade of the 19th century. The trigonometrical survey of Chotanagpur followed under great odds. After this or almost simultaneously, came the engineers to build proper roads.

It was an extremely difficult task to construct the main road connecting Ranchi to Chaibasa. Several overseers of Shahabad district were recruited and they died in the unhealthy area of Singhbhum district. A retired European engineer had to be reemployed for this purpose. The Principal Assistants at both the ends of Chaibasa and Ranchi took great care to complete the

road and when half of the road was completed, one of them wrote a most joyful letter. It is worthwhile trying to catch a glimpse of the joy of those poineers who sacrificed themselves for giving us the present roads of Singhbhum. The road from Chaibasa to Jamshedpur was completed much later.

The geological traverse in the district had, however, started even before the first few main arteries were laid. In 1823 Dr. Voysey had visited "Sureekela" (Seraikela) and made a note of the geology of the area. His reconnoitres gave him high fever and he was found dead in his *palki* on his arrival at Howrah. W. Jones (1833) had noticed copper near "Rajwaha" apparently Rajdoha in the centre of Dhalbhum. In the Journal of Asiatic Society of Bengal, Volume IX (1840) the Memoir on Colehan by Lt. Tickell was published and a short note on the geology of the hills and the occurrence of gold and iron was included. After several years in 1854 Col. J C. Haughton published an account of the gold and copper occurrences in Singhbhum with a geological map.

In 1855 on behalf of Messrs. Durrschmidt, Grob, Sand and Company, Prof. Stoehr and Mr. Schenk had come from abroad to prospect Dhalbhum "geologically and then to fix upon the spots where mines are to be established". The Principal Assistant at Chaibasa was asked to give every possible help to these two gentlemen. The earliest reference to uranium mineral in India appeared in a German publication in 1860 by Emil Stoehr. He had recorded the occurrence of it at Lopso Hill in Singhbhum. The reports of Emil Stoehr and R Schenk are cited in a note on the copper deposit written by C Durrschmidt (1857). Later, in 1860 and 1864, Stoehr published detailed descriptions of the geology of the area. The first general account by the Geological Survey of India was published in 1859. V. Ball had surveyed the area between 1862 and 1868. Singhbhum had sent quantities of ore, among other exhibits to the great Paris Exhibition of 1864. The Geological Survey of India continued doing useful work and their annual reports mention the mineral investigations carried out by various persons in this area. But it was Mr. P. N. Bose, State Geologist of Mayurbhanj, who first published the sensational discovery of the extensive occurrence of iron-ore in Gorumahisani Hills This was the factor that decided for the location of the steel factory in this area. It will be described later that at first the steel factory was going to be located near Sini. The steel factory was founded at Jamshedpur in 1907 (26th August).

The pioneers, many of whom have not been mentioned, did the work more for the joy of it. They have left indelible footprints on the sands of time. The conditions, under which they had worked can hardly be imagined now. The district was full of forests, wild animals, terrains and there were practically no

roads. The inhabitants were highly allergic to outsiders. It was difficult to get supply of food once the party was in the midst of jungles. The climate was extremely unhealthy and the incidence of disease was very high. Many had died in reconnoitring the country and many had ruined their health permanently.

In the last Gazetteer of Singhbhum district published in 1910, there is no mention of the great steel town of Jamshedpur. A reference was only made to village Kalimati where 25 *pucca* houses were being built for the proposed factory of the Tatas which, when completed, was expected to give employment to about 3,000 labourers. The great possibilities of this attempt of the Tatas could not be properly visualised at that time. The growth of the small village of Kalimati into the great steel town of Jamshedpur has an interesting story.

India occupied a pre-eminent position in iron and steel making in the ancient world. The industry on modern lines is fairly young. It, actually, started with the establishment of Tata Iron and Steel Company, Limited in Jamshedpur in 1907. Before this, a number of attempts were made in different parts of India to start the steel industry, as a result of which some saleable pig iron of good quality was, no doubt, produced; but gradually all these ventures failed, the main reason being the failure of the pioneers to locate deposits of good quality of iron-ore, coking coal and raw materials.

During his various visits to Europe and America Jamshedji Nusserwanji Tata was deeply impressed with the need of establishing an iron and steel industry in India. For a number of years he had been working on this plan and had engaged geologists to explore the reserves of iron and other raw materials in India. For some 20 years, he could make no headway because of the restrictive mining laws on the statute book at the time. Eventually he prevailed upon the Secretary of State for India to give the prospectors a fair deal. The search thus set in motion by J. N. Tata in the early years of this century, ultimately led to the exploration of the Dhalli-Rajhara deposits of Madhya Pradesh and of the great hills of iron in Mayurbhanj, Keonjhar, and the Singhbhum districts of Bihar. The discovery of these deposits, which reputedly contain the world's greatest reserves of haematite, the highest quality of iron-ore, is Jamshedji's very great contribution to India.

Mr. Tata visited these States in this connection and engaged the services of Mr. Charles Page Perin, an American engineer, recommended by Andrew Carnegie, and Mr. C. M. Weld, a well-known Mining Engineer. These two gentlemen studied the country, the records of the Geological Survey of India and also contacted the highest officers of the Geological Survey of India. They

worked out a plan of establishing the steel works in Central Provinces and the firm of Tatas launched a campaign in the Indian Press with a view to getting the public interested. At about this time Mr. P. N. Bose, a retired Superintendent of the Geological Survey of India and the State Geologist of Mayurbhanj, informed the Tatas of the extensive deposits of iron-ore at Gorumahisani, particularly the high quality of the ore. Mr. J. N. Tata, the founder and the organiser of the scheme for iron and steel industry in India, had passed away in 1904 but he wanted his heirs to pursue the scheme. The successors to Mr. J. N. Tata took up the idea again on the discovery of Mr. P. N. Bose.

Mr. Perin and Mr. Weld were again invited by the Tatas to visit India to prospect this area. The area was visited by them along with Mr. D. J. Tata (later Sir Sorabji Tata) and Mr. Shapurji Saklatwala on elephants and on foot. The American experts were at once struck with the importance of the discovery and the entire scheme for the setting up of the iron and steel Industry was recast. The location of the industry was changed to the present site on account of both iron and coal being found in proximity.

At first Sini, a railway junction, about 60 miles north-west of the Gorumahisani Hill, was chosen by Mr. Perin and Mr. Weld. This was the site mentioned in the prospectus issued on the 26th August 1907. The site was found small and had difficulties for getting abundant supply of water. There was also the settlement of criminal tribe in the neighbourhood. All this made the sponsors hesitate to finally select the spot. Mr. P. N. Bose's discovery was being followed up in the meanwhile and ultimately the site of Sini was given up and Sakchi, about 2½ miles away from the way side station of Kalimati on the former Bengal-Nagpur Railway, was chosen. The reasons for choosing this area were that ample land of a suitable type was obtainable and it was found to be the central place for collection of raw materials, namely, coal from one direction, iron-ore from another and limestone from the third direction. As all equipments and materials at the beginning had to be imported from Europe and America and inland freight was much higher than the steamer freight, this site was most suitable being close to a seaport. The confluence of the two rivers, the Subarnarekha and the Kharkai, assured a perennial source of water-supply.

The discovery of Mr. P. N. Bose of the extensive deposits in this area led to the location of the site of the steel works at Kalimati which had now grown into one of the largest steel cities of the world. The Tatas have erected a statue of Mr. P. N. Bose to commemorate him. It may be mentioned that Mr. P. N. Bose had refused to accept any consideration from the Tatas as he refused to make money out of his research and prospecting.

The new site (where the modern town of Jamshedpur stands) lay on the north-western extremity of Dhalbhum *pargana* in Singhbhum district covered by the villages of Khuntadih (with *tola* Beldih), Sakchi, Mohulberra, Susnigaria and Jugsalai with a total area of 3,504.63 acres, situated between the railway and the Subarnarekha river, and a request was made to the Government of Bengal through Deputy Commissioner, Singhbhum for acquisition of above lands at Company's expenses under provisions of Land Acquisition Act of 1894 for construction of the proposed steel works together with dwellings for staff, hospitals, schools, markets, cemeteries, religious institutions, roads and water-supply system, etc., which would be required for the running of the proposed works. Tatas' proposals received prompt and favourable response from the Government of Bengal. Sir Andrew Fraser, the Lt.-Governor, and E. A. Gait, Chief Secretary (later Lt.-Governor of Bihar and Orissa) took a great interest in the matter and cut down the usual procedural delay to the minimum.

On receipt of reports from Deputy Commissioner and Legal Remembrancer the Government of Bengal declared by their Resolution no. 1623, dated the 10th March 1908 that the Local Government was satisfied that the proposed acquisition of land was needed for the construction of the Iron and Steel Works and that such works were useful to the public, as required under provisions of section 40 of the Land Acquisition Act. After going through details regarding cost of acquisition, compensation, adjustment of different rights and other conditions, an agreement was signed between Government of Bengal and Directors of the Company on the 12th July, 1909 and the same day, vide notification number 2149-L.A., a formal declaration regarding actual description of lands to be acquired was issued by Government.

The notification ran as follows :—

No. 2149-L.A., dated Calcutta, the 12th July, 1909.

DECLARATION.—By the Government of Bengal, Revenue Department.

"Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken by Government at the expense of the Tata Iron and Steel Company, Limited, for the purpose of their iron and steel works in the villages of Beldih, Sakchi, Susnigaria and Jugsalai, *pargana* Dhalbhum, zilla Singhbhum, it is hereby declared that for the above puprose a piece of land measuring, more or less, 10,782 *bighas* 19 *cottahs* and 5 *chitaks* of standard measurement, bounded on the—

North—By a line drawn from a point on the north-west corner of the village site of Sakchi about a quarter mile from the river Subarnarekha, and thence to the south-west corner of the village site of Sakchi

and thence to the south-east corner of the said village site, and thence to the south-west corner of the village site of tola Kasidih of village Sakchi and thence to a point south-west of the village site of toal Mohulbera of village Sakchi, and thence the line goes straight eastwards and meets the common boundary of villages Sakchi and Golmundi;

East—By villages Golmundi and Kalimati;

South—By Bengal-Nagpur Railway land;

West—By river Kharkai from the Railway line to the eastern boundary of village Khuntadih and thence along the common boundary of villages Jugsalai and Khuntadih up to the tri junction point of villages Khuntadih, Beldih and Jugsalai, and thence along the common boundary of villages Beldih and Jugsalai up to a point west of the village site of Bistupur, a tola of village Jugsalai, and thence to a point from the north-west corner of the village site of Beldih, and thence to a point east of the village site of Beldih and thence by an irregular line up to the starting point;

is required within the aforesaid villages of Beldih, Sakchi and Susnigaria

"In addition to this a strip of land is required which is about 50 feet wide and about a mile long connecting the aforesaid land with another piece of land about 4 20 acres in area situated partly on the bank of the river Subarnarekha and partly in the bed of the said river which is also required for the site of a pumping station.

"Another strip of land 100 feet wide and 1,150 feet long, being about 2.66 acres and starting at third or pumping station parcel on the south bank of the Subarnarekha river, and proceeding thence in a north-westerly direction diagonally across the river to its opposite bank, is also required. This strip of land lies practically wholly in the river bed.

This declaration is made, under the provisions of section 6 of Act I of 1894, to all whom it may concern."

Under the terms of the above Agreement, the entire area covering 3,504.63 acres on acquisition was to be transferred by the Secretary of State so as to vest absolutely in the company (i.e., the company would hold the lands free from the payment of land revenue) subject to certain terms and conditions, the most important of which was that if works to the value of 12 lakhs of rupees were not erected within the stipulated period of 5 years, the local Government would be able within six months

after expiry of the period to take possession of the lands acquired or any part thereof on payment of the price paid by the Company in the acquisition proceedings.

As to the actual condition of the land in question, the following description is based on various correspondence on the subject and specially the report of the Deputy Commissioner of Singhbhum no. 1949, dated the 10th February 1908. The entire area lay in the Dhalbhum estate under the management of Deputy Commissioner of Singhbhum and Chotanagpur Encumbered Estates Act. The proprietor, some three years earlier, had granted a lease for 25 years to the Dhalbhum syndicate, and the Tatas had obtained from that syndicate by private negotiation the whole of its interest in an area of 17 square miles including the area to be acquired.

Describing the area, Mr. H. D. Carey, the Deputy Commissioner observed, "The tract is all thin village forest interspersed with a few small patches of cultivation none of which is of the first quality. The loss to the villagers in cultivation is very small." The Deputy Commissioner in course of his local enquiry discussed Messrs. Tatas' proposals on the spot with tenure-holders, headmen, assembled villagers and the Agents of the Company. The Tatas had originally applied for a larger area but at Mr. Carey's instance, it was agreed to omit all the homestead lands and large block of rice lands and to acquire only jungle and waste lands with a few patches of cultivation. The only exception to this was the small village of Susnigaria which contained "some 10 or 12 houses close to the railway station cultivated by people accustomed to labour and a small bazar". The Tatas promised to the Deputy Commissioner that they were "fully prepared to do what they are able to find new lands for dispossessed inhabitants", and as the company had acquired the rights of Dhalbhum syndicate over a large area there was ample land available to resettle them.

As regards other rights involved, the two villages, Jugsalai and Susnigaria, were part of a large property reserved for the maintenance of the senior widow of the Zamindar's family at a quit-rent payable to the estate and it was decided to compensate the *Kharposhdar* by alienation of other villages from the estate in lieu of the villages taken. The Zamindar was roughly to be paid 30 years' purchase of the net profit which was estimated at Rs. 1,440 and the *Kharposhdar* was to be paid 25 years' net profit commuted at Rs. 1,100.

As to *raiyats*, the villages were Bhumij settlements in which the villagers had the right to cultivate and take village forest produce on payment of rent and cess. The headmen had the right to collect this and to deduct a commission of 20 per cent for themselves. The compensation decided for these people for

cultivated and homestead lands varied from Rs. 28 per acre to Rs. 400 per acre. As the cultivated areas were only few and far between, the compensation on this account was to cost Messrs Tatas only a little above Rs. 12,000. As for the huge areas covered by forests, the Deputy Commissioner observes, "There is no longer any timber of any value in these forests, the Zamindar realises practically nothing beyond his jungle cess and the area is never likely to be reafforested. The yield is fuel and small poles for villagers' houses and agricultural implements, a little lac, a very small quantity of wild cocoons (*tusser*). Perhaps 5 per cent of the area might be converted into patches of rice land but at considerable cost, and about 10 per cent into upland cultivation but at present the raiyats have spent very little labour in doing so". The rate of compensation fixed for the forest lands was, therefore, only Rs. 7 per acre which totalled about 24 thousand rupees. The small bazar was valued at Rs. 1,000. The net amount to be charged from the company for the entire area, including the cost of acquisition, was to be just about Rs. 50,000. No compensation was to be paid for loss in grazing and fuel in the forests as the company agreed to permit tenants of the villages acquired grazing and fuel rights without any further charges in the adjoining villages which they had acquired from the Dhalbhum syndicate. The Deputy Commissioner was satisfied that the villagers will be amply repaid for the above loss by the new facilities that would open to them for employment. He observes, "These communities retain little of their jungle habits, in fact in the chief village of Sakchi—the headmen and the number of villagers are Kumhars who came a generation or two ago from Burdwan after some stay in Seraikella and all will readily avail themselves of the opportunities provided for earning. I spoke with many, and they all appear to be quite content so long as the matter is looked after by the Deputy Commissioner. The only objector was the foreign headman of Sakchi, who no doubt had meant to exploit the villages against the interest of the original community".

Jamshedji Nusserwanji Tata's Lieutenant Burjorji Padshah and his two sons Dorabji and Ratanji, Mr. R. D. Tata, the father of the present Chairman of the Tata Iron and Steel Company, saw to the floating of the Company on the 26th of August, 1907.

The Company was started with an initial capital of Rs. 2 crores which was wholly subscribed by the Indian investors. Construction activities commenced in 1908, which included not only the building of a steel works but also a modern township with all the necessary amenities. By the end of 1911, the plant was made ready for operation. At that time, it consisted of two blast furnaces, four 40-ton stationary open hearth furnaces, a steam driven blooming mill and a rail and structural mill. The first ingot was

rolled off on the 16th February, 1912 and by the year 1916, the Plant attained capacity production. In 1919 Lord Chelmsford, Viceroy and Governor-General of India visited Jamshedpur and declared the change in names of Sakchi and Kalimati to Jamshedpur and Tatanagar.

After this, it gradually went on expanding.

Regarding the begnining of the steel factory the following account from the *Statesman*, Calcutta, dated 26th August, 1957, will be of considerable interest :—

Old Kalimati Station.

A number of bullock carts were engaged for handling sleepers, rails, cement, bricks and other construction materials from Kalimati station (as Tatanagar railway station was originally called), and in the absence of a regular road, the ordinary cross-country cart track was employed. By the end of 1908 several buildings were completed, but the main line from Kalimati station to the worksite, which was to bring all the structural material for the works, was not completed till August, 1909. About the same time, a road to Kalimati (the predecessor of the present Sakchi Boulevard, the principal highway in Jamshedpur) was constructed. This was then a narrow highway with little traffic, for in those days there were no bicycles or automobiles. These came at a much later date. The first employees' quarters were built along this road which is now the area comprising "G" and "H" Towns and the Gol Khulies (RN type quarters). A small collection of huts known as Bistupur was situated between this area and the worksite.

"Gradually the steel structures of the works began to take shape and in November, 1911, 'A' Blast Furnace with a capacity of 175 tons per day was blown in; 'B' Blast Furnace followed in September, 1912. With the pig iron produced by 'A' Furnace, the steel works or Open Hearth was put into operation, and the first steel ingot was rolled out on the 16th February, 1912.

Imported Talent.

"The steel industry being new to India, many Europeans and Americans had to be imported to start the works and to take care of the various processes connected with the production of steel. Americans were engaged in the Blast Furnaces, Germans in the Open Hearth and Britishers in the Rolling Mill and Bar Mill. From the beginning the control and management of the works was vested in Americans and up to 1939, the General Manager had always been an American. This seemed a natural consequence of the original setting up and development of the plant which was principally designed by Americans and supplied with much American equipment and machinery. The construction engineers and consultants were all Americans and the late

Mr. Perin played no small part in the development of the steel industry in India.

"To add to the European staff there were a few Italians and Russians who worked in the Refractories Department and in the pitside of the Open Hearth. All these people were housed in bungalows in what was then known as the European quarters or Northern Town.

Giant Torches.

"In those early days the jungle at night for miles and miles around was illuminated by the belching flames which came from all the chimneys of the old non-recovery type Copper Coke Ovens. These flames of burning gases from the coal shot many feet into the air and against the dark sky seemed like giant torches. Coming up from Kalimati by rail trolley, the principal means of transportation, these flaming torches caught the eye as the bend of the main line was rounded while below them was a fairyland of lights which pin-pointed the small area then comprising the works and town on the otherwise dark jungle map. Here at the Coke Ovens the aboriginal men and women on night shift (10 P.M. to 6 A.M.) would assemble before darkness fell, as a precaution against wild animals, and sleep in lines on that part of the Coke bench not being used, till it was time for them to start work.

"In the way the 'B' shift (2 P.M. to 10 P.M.) labour living at a distance would stay over till morning or else light their way home with the oily packing removed from axle boxes of railway wagons in the works, which was then conveniently suspended by a piece of wire or other material which could be made into a handle. This systematic removal of oily packing not only in the steel works but in other places as well, caused considerable loss to the railways and the companies who had to pay for the shortage. That is why all axle boxes are now rivetted down to prevent this nuisance and danger to rolling stock.

"Aborigines were the mainstay of the labour force in those days, and were always available in large numbers. In fact they can lay claim to cutting the first sod of an industry which was to provide their progeny with regular employment and the means of livelihood in the years to come.

In the early days, water for consumption in the camp was brought from the river Subarnarekha by bullock carts. So first efforts were directed towards establishing a good supply of water for domestic as well as works purposes. By 1910, a dam across the river was completed along with the River Pump House with a capacity of one million gallon per day. The water was conveyed to the worksite in a 28" dia. pipe line, which runs along with Pipe Line Road. Filter beds were built at the worksite for the supply of filtered water.

Market Day.

"Up to 1916 all marketing was done at Sakchi village where on Sundays produce from the surrounding aboriginal villages was brought in for sale. Owing to the distance between Sakchi and Bistupur, the Company decided to establish a market place at Bistupur for the convenience of the employees residing there. The villagers, however, were not in favour of this scheme and were not prepared to change their market place. The principal objector was, however, the *pradhan* or headman of Sakchi village whose income from the tolls levied on the produce brought for sale was seriously threatened. To encourage people to bring their produce to Bistupur, steps were taken to divert those coming to market, particularly from the south, to Bistupur where space had been provided for stall holders. Gradually the popularity of Bistupur grew and the steel company started to build proper vegetable, fruit and meat markets. The first buildings built in 1916 were blown down by terrific storm on two consecutive Sundays, when the gable ends had reached roof level. In view of this the design had to be changed and the re-designed buildings for the vegetable and fruit markets are those we see today."

The original plant* consisted only of—

180 Copper Coke Ovens from which no by-products could be recovered,

2 blast furnaces,

4 forty-ton stationary open hearth furnaces,

a steam driven blooming mill, and

a rail and structural mill.

During the World War I, the supply of steel from Britain to the eastern theatres of war became well-nigh impossible. Tata Iron and Steel Company, commonly described as Tisco, stepped into the breach and Tata rails were an important factor in the allied victories in Mesopotamia and were so acknowledged by the Viceroy of India, who came to Sakchi in 1919 to rename it as Jamshedpur.

The first stage of expansion took place during the World War I. By 1920 the developments undertaken increased the production of saleable steel to about 1,25,000 tons and the excess of pig iron available for sale to about 50—75 thousand tons.

The second stage of plant expansion took place between 1920 and 1924. This expansion scheme, completed in 1925, raised the capacity of the Works to approximately 4,25,000 tons of saleable

*The first Agent B. B. Wilcox joined Sakchi in January 1908. H. E. Judd took charge of the ore mines and prospecting. W. O. Renkin of Julian Kennedy, Sahlin and Company took up the construction work. The Adibasis attributed the origin of Renkin's name to Rankini Devi, the deity of the Dhalbhum Raj.

steel and 1,00,000 tons iron for sale. Between the years 1925—35, the capacity production rose to 6,00,000 tons of saleable steel. Between the years 1935 and 1942, it further went up to 8,00,000 tons.

After the World War II, the Steel Company embarked upon a modernisation and expansion programme covering the replacement of worn out and obsolete plant as well as the expansion of output and diversification of products. Early in 1955, even when the modernisation and expansion programme had not been completed, the Company decided to increase, further, the capacity of the Tisco Plant to produce 2 million tons of ingots per annum. This was in consonance with the policy of the Government of India to increase ingot steel production during the Second Five-Year Plan period.

The Company, with the approval of the Government of India, concluded an agreement dated the 20th December 1955, with Kaiser Engineers, a division of the Henry J. Kaiser Company, and their sister Company, the Kaiser Engineers Overseas Corporation, for the provision by them of the engineering, procurement, supervision and construction services necessary for the execution of the main part of the "two-million ton programme", estimated to cost Rs. 62 crores, excluding expenditure on modifications to the Works to be done departmentally and on the development of the Company's mines and collieries and town. The entire project was to be completed by the 31st May 1958. On completion of this project and of the Modernisation and Expansion Programme, the productive capacity of the plant will be increased to two million tons of steel ingots equivalent to about one and a half million tons of saleable steel.

The present plant which is under expansion comprises the following main units :—

(1) Coke Ovens,

(2) Blast Furnaces (five),

(3) Steel Melting Shops (three),

(4) Blooming Mill,

(5) Rail and Structural Mill,

(6) Steel Bar and Billet Mill,

(7) New 28" Billet Mill,

(8) Bar Mill,

(9) Merchant Mill.

(10) Plate Mill,

(11) Sleeper Press,

(12) Sheet Mill,

(13) Wheel, Tyre and Axle Plant,

(14) Chemico Plant,

(15) Agrico,

(16) Tool Steel Plant,

(17) Foundries,

(18) Machine Shops, Structural Shops, Blacksmith Shops and Bolt, Nut and Rivet Manufacturing Plant,

(19) Power Plant (three power stations of 5,000 kw, 43,000 kw and 82,500 kw capacity, respectively, and two water pumping stations with a total installed capacity of 2,16,000 gallons per minute),

(20) Magnesite Brick Plant,

(21) Transport Facilities, and

(22) Research and Control Laboratories.

A battery of 26 coke ovens, built by a West German firm, Didier-Werke Ag, at Jamshedpur Works of Tata Iron and Steel Company, was formally inaugurated on the 21st January 1958, as the first phase of the programme of expansion for a two-million tons steel output.

The battery was of the latest type and the only one of its kind in India so far. Among the special features of the new phase were their outstanding economic quality due to low heat consumption and uniform quality of coke, uniformity of heating which could be adjusted to heat requirements and the system of heat regulation from outside.

Coke forms one of the most essential raw materials in the production of steel and so the expansion programme requires an increase in the daily coke output from 3,120 tons to 4,400 tons. The new battery and the three other batteries that were rebuilt are meant to put in this greater output of coke.

The opening of this battery was reported in the *Statesman* of the 23rd January, 1958 as follows :—

"A two-million ton steel output will require 5,300 tons of hot metal per day from the blast furnaces. The present rate of production is 4,200 tons of hot metal every day from the five blast furnaces. The shortfall will be met by a new 28 feet hearth blast furnace with a rated capacity of 1,650 tons per day.

"Iron-ore, coal, limestone, dolomite, manganese and refractory bricks are also among the essential raw materials and vital operational requirements of a steel mill. There are separate projects for expansion of production of each of these raw materials.

"The country's brick making capacity being limited and some qualities of bricks not being available, Tisco is putting up a major refractory plant at Belpahar in Orissa in financial and technical collaboration with Didier-Werke. Estimated to cost about Rs. 32

million, the plant will have an initial capacity of 67,000 tons with a provision for expansion up to 1,25,000 tons.

"Raw materials for this plant will be obtained locally; chrome ore will come from Sukinda in Orissa, magnesite from Salem in South India, power from Hirakud and coal from the adjacent collieries at Ib and Rampur. About 180 miles from Jamshedpur, Belpahar is situated on the main railway line from Calcutta to Bombay.

"After expansion, the company will require 3.4 million tons of iron ore annually against the present requirement of two million tons. The additional requirement would be met by opening up a new mine at Joda in Orissa and by stepping up production at Noamundi, said to be the largest mine in Asia. These two mines will supply 2.35 million tons of ore, all of which would travel over a branch line which was already hard pressed. The South-Eastern Railway was doubling the track on this line and building a 16 mile extension from Noamundi to Joda.

"An alternative plan for the transport of Noamundi and Joda ores would be to build a connecting link between Noamundi and Badampahar from where ores could be hauled to Jamshedpur over another branch line which is believed to have spare capacity.

"Shortage of metallurgical coal in India constituted one of the main difficulties in the production of steel. This required a number of washeries to reduce the percentage of ash content. The company which had two washeries now in operation approached the Government for permission to set up some more washeries. The permission was not granted

"The company's expanded plant would need nearly three million tons which would have to be purchased from the market, the balance being met by the company's own collieries in the Jharia and Bokaro fields. The coal had to be washed before it could be used in the blast furnaces otherwise it would impair their efficiency The Government was setting up a washery at Bhojudih to wash the market coal for supply to Jamshedpur. For a variety of reasons, the setting up of the washery was greatly delayed with the result that adequate supply of washed coal was now uncertain. Besides affecting furnaces' efficiency, the use of unwashed coal would lead to many operational difficulties and an additional expenditure of over Rs 10 million"

JAMSHEDPUR TOWN.

The growth of Jamshedpur town to its present stature is solely connected with the growth of the Tisco. The Tatas had originally decided in 1904 to utilise the iron-ores from the Dhalli-Rajhara range in the Drug district and set up the works at a place called Padampur on the banks of the Mahanadi. When, however, late Mr. P. N. Bose, who was then the geologist of Mayurbhanj State, drew the attention of Tatas to the rich ore deposits

of Gorumahisani Hills in Mayurbhanj, it was decided to shift the venue of the Steel Works from Padampur to Sini. However, owing to the lack of a large source of water-supply at Sini, the site was abandoned in 1907 in favour of Sakchi, which was about 20 miles away. Sakchi is situated at the confluence of two rivers—Subernarekha and Kharkai—ensuring a perennial source of water-supply. It was also adjacent to the Kalimati railway station which lay on the main railway line.

The choice of the village, Sakchi, was guided by the fact that it was within an easy access of iron-ore, flux, and coal; it had a perennial supply of water; it was also on the main railway line and about 156 miles from the port of Calcutta.

By an indenture, dated the 5th April 1908, the Tata Iron and Steel Company, Ltd., obtained an underlease of the property from the Dhalbhum Syndicate, Ltd. Having obtained the area more or less coinciding with that of the present Jamshedpur, but including the entire village of Jugsalai on the south, the work of construction was started. The management applied subsequently to the Government of Bengal for the acquisition of an area approximating 3,510 acres for the Works and town. The acquisition was completed in 1912 at a cost of Rs. 46,000 and the area comprised the villages in part of Sakchi, Beldih, Jugsalai and Susnigaria.

In 1916, the management applied to the Government of Bihar and Orissa for the acquisition of the rest of the area, comprising approximately 20 square miles, including the villages of Kadma, Comryagora, Ulyan, Sonari, Sakchi, Bara, Baridih, Nildih, Jojobera, Kalimati, Moharda, Khuntadih and several others. The acquisition was sanctioned and the work commenced in 1917 and completed in 1920, at a cost of Rs. 15 lakhs.*

Jamshedpur has an area of 25 square miles, bounded on the north by the Subarnarekha, on the west by the Kharkai, on the south by the Eastern Railway line between Calcutta and Bombay and on the east by the cadastral survey boundaries of the different villages.

The first lay-out of the town was prepared by Messrs Julin Kennedy Sahlin of Pittsburg, U. S. A. It was designed more or less on American lines with roads at right angles. In 1920, Mr. Frederick Charles Temple, who was then the Sanitary Engineer to the Government of Bihar and himself a Town Planner, was engaged as the Chief Town Engineer. In 1936 Major P. C. Stokes,

*The first post office was started in Jamshedpur in 1912. Before that letters were to come from Sini where Tisco had a forwarding agent. The first police thana was started in 1912 followed by the first school and the first court in 1913. The first Ganesh Puja was observed in 1914 and the first Durga Puja in 1919. The Jamshedpur Sporting Association came into existence in 1919.

who was connected with Quetta Reconstruction after the earthquake, was invited by the Company to advise on town planning and development. In 1943, Dr. Keonigsberger was invited to advise on the planning of the town. He prepared a master plan which was accepted by the Steel Company and is now strictly adhered to.

Governance.

With the development of the town and extension of the housing colonies by the Steel Company and the various Associated Companies, the Tata Iron and Steel Company in the year 1923 piloted a scheme for constituting a Governing Body for the better municipal administration of the town and the local area roundabout Jamshedpur. By an agreement entered into between the T. I. S. Company and seven Associated Companies then existing, viz., (1) Calmoni Engineering Co., Ltd., (2) Peninsular Locomotive Co., Ltd., (3) Agricultural Implements Co., Ltd., (4) Tinplate Company of India Ltd., (5) Indian Steel and Wire Products. Ltd., (6) Enamelled Ironware Ltd., and (7) Indian Cable Co., Ltd., a Governing Body of the town of Jamshedpur was formed, consisting of (a) Committee of Companies; and (b) Board of Works to hold office for a period of three years from 1st April, 1923.

Under the powers conferred by section 389 of the Bihar and Orissa Municipal Act, 1922, the Provincial Government by notification issued in June, 1924, constituted Jamshedpur into a "Notified Area" and appointed a Committee of 11 members for administering it. With the constitution of the Notified Area Committee, the above Governing Body for the town of Jamshedpur was abolished by the Steel Company with the common consent of the parties to the 1923 agreement.

There is no system of assessment and taxation is in force in this area and as such there are no rate-payers. Services of municipal nature are provided for and financed by the Tata Iron and Steel Co., Ltd. and the other Associated Companies in their respective areas. The Committee's main sources of income are from municipal registration and license fees for carts, for vehicles plying on hire and for carrying on trades of offensive and dangerous nature.

By Government notification no. 951-L.S.-G., dated the 27th July 1945, the jurisdiction of the Committee was further extended in 1945 to another 6 miles by the inclusion of the villages of Mango, Pardih, Dimna and Baliguma and thus the total area under the control of the Committee comes to 31 square miles.

As regards administration, Jugsalai was the first police-station to be established in this area. Subsequently another police outpost was set up at Bistupur which was ultimately converted into a regular police-station. A Deputy Magistrate from the district

headquarters of Chaibasa used to come once a month on circuit to Sakchi for trying cases. The administration of law and order was carried on from Chaibasa, the district headquarters.

Government constituted in 1920 a separate subdivision of Dhalbhum with its headquarters at Jamshedpur. A Subdivisional Officer with a small staff was posted at Jamshedpur under the control of the Deputy Commissioner at Chaibasa. The Police administration of Dhalbhum subdivision was put first under an Assistant Superintendent of Police and subsequently under an Additional Superintendent of Police with headquarters at Jamshedpur.

As the town expanded, police-stations were established at Sakchi, Golmuri and Burma Mines and outposts have been established at Kadma and Sonari.

During the Second World War, Jamshedpur assumed very great importance especially on account of the Japanese threat to bomb the works. Elaborate Air Raid precautions and civil defence precautions were taken by the Government both for the works and the city. There used to be a net of balloon barrage over the city. The headquarters of the Deputy Commissioner was temporarily shifted to Jamshedpur for administrative exigency and an Additional Deputy Commissioner was appointed at Chaibasa to help the Deputy Commissioner in the district administration and this arrangement continued till August, 1953. The headquarters of the Deputy Commissioner was again shifted to Chaibasa from September, 1953. The Additional Deputy Commissioner also continues to be stationed at Chaibasa. With the growing importance of Jamshedpur and the other areas in Dhalbhum subdivision, the administrative staff both for Civil and Police administration have been considerably strengthened.

Housing.

The Steel Company had built about 12,000 houses of various types till 1953. This figure has considerably gone up now. The standard of minimum accommodation for the workman since 1932 has been fixed at two living rooms with ancillary conveniences.

As regards sewerage, the bungalows have been provided with flush system water-closets and the sewage flows by gravity to the various pumping stations, from where it is pumped to Bara. A modern Sewage Disposal Plant capable of dealing with four million gallons of sewage per day and a Sludge Digestion Plant has been erected at Bara in the eastern part of the city for sewage purification and final disposal. This site is well away from inhabited areas. The digested and dried sludge is made available as manure. In some houses, although wash-down type of latrines are provided, they are connected direct to the sewers. The sewerage system is gradually being extended to the *bustees* also.

Private Houses.

There are also a number of houses belonging to the Government for Government employees. The Company have also allotted a number of plots of land for the building of private houses. A large number of private houses have been built under this arrangement. There are 23 *bustees*, and the total number of holdings is 8,085 of which approximately 58 per cent are owned by employees. These holdings are on monthly tenancy.

Markets.

Regular markets are now held at Bistupur, Dhatkidih, Sakchi, Golmuri, Kalimati and other areas and the sources of supply are the rural areas in Dhalbhum, Ranchi, Hazaribagh in Bihar, Purulia in West Bengal and Orissa. Jamshedpur has well equipped shops in different parts of the town. They are one of the best shopping centres in the State. There is a great turnover in all kinds of commodities now. The supply is brought by trains, other kinds of vehicles and man-power.

Water-Supply.

In the early days, water for consumption in the Camp was brought from the river by bullock-carts. When the Steel Company was first set up, a dam was built in 1910 across the Subarnarekha with a view to impounding water for the works and the town. With the increase in population, the slow sand filters could not cope with the demand and in 1921 and 1922 the Paterson Filtration Plant with the necessary settling and coagulating tanks and chlorination equipments was provided. It was located in Sakchi near the Subarnarekha with a capacity to filter 2½ million gallons of water per day. With the further expansion of the town, the plant was further extended in 1927 and again in 1938. The distribution of water to the town is through eight balancing reservoirs or towers in different parts of the town to which the filtered water is pumped from the filtration plant. The system of supply of filtered water through the reservoirs situated in the different parts of the town ensures prompt and equitable distribution of water in all areas. Though there is some flow of water in the Subarnarekha throughout the year it was found insufficient, especially in summer, to meet both the industrial and domestic requirements. In the years 1934 and 1936, at one time the levels were so low that it became almost difficult to pump out any water.

Dimna Lake.

These difficulties coupled with the vast expansion of the town and various works, led to the origin of the present Dimna lake. After a preliminary survey, it was found possible to put a dam across a small stream called "Dimna Nalla" about 10 miles north-east of Jamshedpur town. A detailed survey was made. The construction work was taken up in 1940 and completed in 1944-45.

An earthen dam with masonry core wall, about 2,000 feet in total length, was put across the two branches of Dimna Nalla near about village Mirzadih. The maximum height of the dam is 85 feet above the bed level of the main stream. The net storage of the reservoir up to full supply level of R.L. 524 is 5,530 million gallons with a water spread of 1.79 square miles. The catchment area of the reservoir is about 36 square miles and the surplus water in the dam is over-flooded over a weir, 165 feet wide, to protect the dam against high flood and an emergency escape, about 575 feet long, has also been provided.

The outlet consists of 36″ steel main housed in a concrete tunnel with control valve at the dam end of the tunnel. A duplicate pipe, 36″ in diameter, has also been provided in the tunnel with a view to meeting the increase in draw-off as and when necessary. From this reservoir, water is taken to the filter plant through a 36″ steel gravity main, which is about 4 miles long.

Further expansion scheme of the reservoir is also under operation. The scheme, when completed, will increase the storage capacity from 5,530 million gallons to 7,960 million gallons and the supply level from R.L. 524 to R.L. 531. A duplicate 36″ steel main is also being laid with a view to getting increased draw-off as and when necessary. At present the discharge capacity is 15 million gallons per day when the water level is 500 feet. After the expansion, this will increase to 30 million gallons per day.

Situated at the foot of Dalma range and flanked by small hills with thick jungles, the Dimna lake is a beauty-spot. Overtopping the lake, the Tatas have built up a beautiful "Lake House" for guests. This place has also been connected by a beautiful road and telephone lines. All modern facilities such as electricity and water taps have also been provided.

Hospital and Medical Relief.

Adequate provisions for hospital and medical relief of a high standard have been made available by the different concerns at Jamshedpur. The Tatas' Main Hospital is one of the most modern hospitals with all medical and surgical facilities.* There is also a Government Hospital. Fuller details will be found in the Chapter on "Public Health".

A well-equipped hospital for tuberculosis patients, known as Ardeshir Dalal Tuberculosis Hospital, was started in 1953.

Education.

The first primary school was opened in 1915 by Mrs. K. M. Perin. Now there is a net-work of schools in the town. The Steel Company runs 40 schools, of which 4 are High Schools (2 for boys, 1 for girls, and 1 free Night High School), 11 Middle Schools

*The origin was in a Camp Hospital with a very small stock of medicine and apparatus with Dr. S. Chakravarty and a compounder.

(4 for girls and 7 for boys) and 25 Primary Schools. Of these Primary Schools, 8 are Upper Primary and 17 Lower Primary. Besides these, the Company gives grants-in-aid to 36 other schools. All these schools, with the exception of probably a few, run in two shifts. The total number of scholars on rolls in these schools taken together are about 30,000 and there are more than 600 teachers.

Apart from these schools, there is a college known as Jamshedpur Co operative College. This is, at present, in the formative stage. There is also a Jamshedpur Women's College run on tutorial basis. The Roman Catholic Fathers have a St. Xavier's School and post-graduate classes for the study of Social Sciences and Labour Relations. The Loyala School and the Girls' Convent are run by the Roman Catholic Mothers. There are also several other schools run by committees other than the Tatas or the other concerns. Th· Ram Krishna Mission runs a number of schools with about 3,000 students.

The total expenditure of the Company over education is to the tune of about 13 lakhs, which is partly subsidised by Government in the form of grants. The Company has its own system of management of the schools. There is a committee, consisting of 18 members, known as School Committee. Under this committee, there are a number of sub-committees to look after different interests. Some of the other concerns run their own schools.

More details will be found in the Chapter on "Education".

Technical Education.

The Tata Iron and Steel Company has a comprehensive programme of well organised technical training. Started in 1921 the Institute has various training programmes. The first is intended to provide fully qualified men to take over positions of responsibilities in the Company's management. Under this scheme, about a dozen young men with degrees in various branches of engineering are recruited as apprentices each year and given a theoretical and practical course of training lasting for two years at the end of which they are started as supervisors.*

Under the second scheme about 30 young men, with high school education, are given a two-year theoretical and practical course of training which makes expert craftsmen of them.

The third scheme makes it possible for unskilled men in the employ of the Company to become skilled workers or, if they

*Starting with the first batch of trainees numbering 18, there are 1,400 students and trainees on its rolls now. The Institute has trained nearly 600 engineers and over 1,200 skilled artisans. Various schemes have recently been added like the Summer Courses, Preliminary Training Course for Adibasi and Scheduled Caste candidates, Mason Training Scheme, Courses in Electrical Engineering and Refractory Engineering, Technical Night Schools, etc.

are skilled workers, to improve their skill and their chances of promotion.

In recent years, the scope and functions of the Institute have been widened and it now offers training facilities to trainees nominated by other industries and Government.

Social and other activities.

Jamshedpur has a large number of social clubs and organisations. There are more than 60 clubs and a large number of social welfare institutions of social work. The range of associations is wide and cultural pursuits take a prominent place. Academics of music, dancing, fine arts and drama, study circles, literary and scientific societies, district branch of Bharat Scouts and Guides and the Rotary Club are some of the important institutions. The 'Chalantika' is a literary society where social and cultural meets are often held. The local branches of the two national central institutions, the National Council of Women in India and the All-India Women's Conference have a large number of ladies as members. There are two other institutions, namely, the Harijan Sevak Sangh and the Ram Krishna Mission, both of which are rendering valuable services to the town.

Open spaces, playgrounds and trees.

Jamshedpur has produced some of the finest sportsmen and athelets in Bihar. This has been mainly due to adequate facilities for sports available in the city. There are a number of open spaces and playgrounds. There is also a small but well-designed stadium known as Keenan stadium. Some of the clubs, mainly the important ones, have also fine swimming pools. There are also a large number of parks. Recently the Tatas have started putting up a beautiful 200-acre park with Moghal garden, fountains and children's corners. This is known as Jubilee Park in commemoration of the golden jubilee of the town of Jamshedpur (1957). Inside this park is a small lake, known as Bagakudar lake. This enhances the beauty of the park and provides an excellent picnic place and pleasant spot to the residents of the place.

The roads of Jamshedpur are fairly broad, well-lit and mostly flanked by trees, such as *Ashok* (Saraca indica), Jack (Artocarpus integrigolius), mango (Mangifera indica), *neem* (Azadirachta indica), peltophorum (Peltophorum ferrugineum), gold mohar (Poincians regia), Indian Cork (Millingtonia hortensia), eucalyptus (Eucalyptus citriodora), flame of the forest, Indian Laburnam (Cassia pistula), Persian lilac (Melia azedarach), different varieties of cassias, *siris* (Albizzis lebek), *Kerang* (Pongamia glabra), sleeping or Rain tree (Bauhinia purpurea), lagerstroemia (Flos reginae), silver oak , mahagony (Swistenia mahagoni) and *sisam* (Dalbergia sissoo).

Telephone.

The Steel Company maintains and operates telephone system for the town and the Works under a licence granted by the Government of India. The whole system of telephone communication in the town and the Works is operated through a main exchange and 13 branch exchanges. The total number of telephone lines is about 2,500. The average number of calls on the main and branch exchanges is about 45,000 per day.

Besides this, Government also maintains a small exchange for trunk calls.

Sports and Recreation.

The playgrounds in the town are under the control of the Jamshedpur Sporting Association, affiliated to which are the local sporting clubs and organisations. The games usually played are foot-ball, hockey, cricket and volley-ball. Various tournaments and leagues are conducted by the Association. As the headquarters of the Bihar Cricket Association ,Jamshedpur has been the venue for fixtures with outside teams like the M. C. C., the Commonwealth Team, West Indies, etc. There are at present four cinemas in the town. The Steel Company's Welfare Department also gives free cimema shows in different *bustees* once a week for the workmen and their families and other residents. There are five such cinema centres.*

Floods and Fires.

Jamshedpur being situated at the confluence of the Subarnarekha and the Kharkai, is subject to high floods when the two rivers are in spate at the same time. The river level, where the Waterworks are situated, rises by anything from 50 to 60 feet. Jamshedpur experienced high floods in the years 1919, 1927 and 1943 and the levels recorded were 420 feet in 1919, 433 feet in 1927 and 440 feet in 1943.

There is a special fire brigade department with the necessary equipment under the charge of a Chief Fire Brigade Officer, besides the Fire Brigade maintained by the Government.

Places of public worship and burial grounds.

There are at present a number of churches, *guruduaras*, mosques and temples in the different parts of the town to serve the religious needs of the different communities of the town. The Brahmo community has not yet got a separate church for them. They meet in friends' houses for their church services.

*The race course was laid out by the jungles near Sakchi and for some time racing was quite popular. The other institutions that have encouraged sports are the Tata Institute, Milanee, etc. Mushroom Clubs are being discouraged and affiliation to the Jamshedpur Sporting Association has been limited to a relatively smaller number of clubs.

Burial grounds and places for cremation at suitable sites have been provided.

Aerodrome.

Jamshedpur has an aerodrome of considerable size since 1935 when it was registered by Government as suitable for all classes of air traffic. It mainly serves the Steel Company and Government at present. Jamshedpur is not on the route of any scheduled air service so far.

Transport.

There are a large number of taxies which are available at reasonable rate. The State of Bihar runs a transport service for passengers in the city. There are a number of buses for this purpose which run on scheduled timings. There are also a number of hand-drawn rickshaws for particular areas. Cycle rickshaws are wisely not permitted as the roads have a gradient which is rather dangerous for rickshaws, particularly because of the heavy motor traffic.

Carriage vehicles are prominent by their absence. Two decades back there used to be a number of horse-drawn vehicles which have slowly died out. For the carriage of goods traffic, there are a large number of trucks available. Jamshedpur is also the centre of a heavy vehicular passenger traffic for Chaibasa, Purulia and Dhanbad. By bus one can go from Jamshedpur to parts of Orissa via Chaibasa and Keonjhar or via Mayurbhanj (Baripada). Jamshedpur is also connected by Grand Trunk Road to Calcutta via Purulia and Dhanbad or to Delhi.

Tisco and the other concerns maintain a large number of vehicles for their own purposes. The number of privately owned cars in the city is very large and is on the increase.

ASSOCIATED INDUSTRIES.

TATA ENGINEERING AND LOCOMOTIVE CO., LTD., JAMSHEDPUR.

History.

The Peninsular Locomotive Co., Ltd., was formed in 1921. The plan of manufacturing 200 locomotives, being the minimum requirements of the Indian Railways, could not materialise and the Company had to shut down in 1925. The Government of India then took it over for the construction of carriage underframes and wagons. It started functioning again in 1928 and closed down in 1934 due to lack of orders. With the war emergency, the Defence Department of the Government of India resuscitated this workshop in 1940 for the manufacture of armoured vehicles. On the termination of the hostilities in 1945, the workshop had outlived its usefulness and when the Defence Department announced their intention of giving it up, the Government

of India entered into an agreement with Messrs Tata and Sons, Ltd., for the latter to take over the workshops for the manufacture of locomotives and locomotive boilers.

The Tata Engineering and Locomotive Company, Limited—Telco for short—was incorporated in 1945 when the East Indian Railway Workshops at Tatanagar were taken over by the Company. The old workshop was completely pulled down and a new one was built up on the site. The workshop has three divisions, e. g., Locomotive, Automobile and Foundry.

Locomotive.— The construction phase of the Locomotive shops was completed in 1951 and locomotive production began in early 1952 with a target of 50 locomotives and 50 spare locomotive boilers per year with 75 per cent indigenous content. This target was achieved within 2½ years of the inception of the Locomotive Workshop. The future expansion programme of this workshop is under way and when completed, the output will be stepped up to 100 locomotives a year.

Automobiles.— In the year 1954, the house of Tatas entered into an agreement with Daimler-Benz of Germany, which is famous throughout the world for high quality products. The original plan was to make 3,000 trucks and bus chassis a year ; but due to the increased tempo of demand it was decided to double the automobile plant and accordingly, planning for 6,000 units a year was made. With the present demand, the target may be further increased in future. So far the Company has already turned out 15,000 trucks and bus chassis.

Apart from these two workshops the Company is also setting up a foundry " modern and completely mechanised " in collaboration with the well-known Belgium firm Messrs Usines Emile Henricot which, incidentally, is also one of the world's leading steel founders.

Housing.—There are about 6,892 workers in the factory. To provide them with house a new township has been built with modern designs and planning. The houses have been built with hollow concrete blocks for which a special plant has been put up. A modern Dutch-American designed plant has been put up to treat the sewage of the works and the township. Water-supply has been arranged with Tisco. Raw water is taken from them and filtered by a filter plant set up by the Company.

INDIAN STEEL AND WIRE PRODUCTS.

The original concern was formed some time during the period immediately following the last World War (1914—18) along with so many other industrial concerns, which came into existence as a result of war prosperity and the necessity of having key industries established. But the concern did not survive the heavy

slump that followed due to foreign competition and it was ultimately brought under liquidation. It was then purchased by Sardar (Sir) Indra Singh in the year 1927. The total capacity of the mills at the time of purchase was less than about 1,500 tons wire and wire products a year. The capacity of the plant was increased to near about 12,000 tons of wire and wire products and Government protection was granted in 1931. It took near about three years, i.e., from 1932 up to the beginning of 1935, before the mill could be established to commence operations. The capacity of the plant was raised to nearly 40,000 to 45,000 tons of rods per year. This meant increased output of other subsidiary products of wire and wire nails. The concern had grown sufficiently by then and was made into a limited liability company on 1st April, 1935 with the founders as the Managing Agents.

Immediately on the close of World War II, extensions, additions and re-modelling of the plant was taken in hand. With the improvements the production has shown further improvement. The Company has installed a Sulphuric Acid Plant also to make itself independent of outside suppliers, this being one of the most important raw materials required for the industry. The installed capacity for wire, rods and other products is over 1,20,000 tons a year. But, owing to shortage of steel billets the plant is not working to capacity. This concern is still the only manufacturer of tin plates in India. The present output is around 70,000 tons a year as against initial production target of 28,000 tons a year.

The Company has at present about 2,200 employees on their rolls and a good portion of this number has been given quarters. There is a well-equipped hospital. The works have a creche, lower primary school, a club, a canteen and a co-operative society.

THE INDIAN HUME PIPE CO., LTD. JAMSHEDPUR.

The Indian Hume Pipe Co., Ltd. started the factory on the banks of Subarnarekha river in Jamshedpur in the year 1926 for manufacture of reinforced cement concrete hume pipes on hume centrifugal process. These pipes are used for water-supply, drainage, irrigation and culverts and are manufactured from 3" to 96" dia. These concrete pipes can be used for low and medium pressures. For high pressure hume steel pipes from 9" dia. onwards are manufactured. These are electric welded pipes made from steel plates and are used for water-supply, drainage, gas mains, hydro-electric schemes, etc., and are tested to any required pressure. The Company started the Hume Steel Plants in Jamshedpur in the year 1932. These steel pipes are lined and outcoated with reinforced cement concrete, thus protecting the steel from corrosion and gives the steel long life and strength. There are 193 labourers working in the factory.

Reinforced cement concrete spun poles used for electric transmission lines, lamp posts, standards, etc., are also manufactured by the Company since 1938.

The Tinplate Company of India, Limited.

The works are situated at Golmuri, three miles from Tatanagar. They cover an area of about 220 acres. The works, which were originally designed to produce 28,000 tons packed tinplate annually, commenced operations at the end of 1922. In 1951 production was running at over 69,000 tons packed tinplate or nearly treble the original capacity rating. The principal raw materials used in the manufacture of tinplate are steel, tin and coal. Steel is drawn from the Tata Iron and Steel Company, Ltd., which supplies this on special wagons in the form of tinbar. The Tata Co. also supply the works and town with electric power and water. Tin is imported direct by the Company from Malaya. Supplies of coal are drawn from collieries in the Disergarh and Rampur groups. About 5,546 workers are engaged for whom there are canteen, hospital, clubs and schools.

Jamshedpur Engineering and Machine Manufacturing Company, Limited.

Jamshedpur Engineering and Machine Manufacturing Co., Ltd., was established in 1921. It was a European managed firm manufacturing textile. In 1923, it was reconstituted as the General Engineering Works. In 1934, it was purchased by Mr. Jivan Lal Motichand, who, in 1936, transferred his interest in the concern to Messrs. Indra Singh and Ltd. It has now fully equipped machine shops, pattern shop, a general foundry, a roll foundry, a roll turning shop and chemical laboratory. It had taken over Calcutta Monifieth Works which used to produce castings for Jute mill machinery.

At present the concern is engaged in the manufacture of different qualities of rolls such as plain chill rolls, sand cast grain rolls, etc. The concern manufactures chilled cast iron-wheels which are used in locomotive tenders and in goods wagons. Special duty castings, e. g., for anti-corrosive and heat resistant castings and other specialised lines of manufactures which are required for the chemical nature, are also undertaken. The number of labourers is 447, besides casual labour.

The Indian Oxygen and Acetylene Company, Limited, Jamshedpur.

The Indian Oxygen and Acetylene Company (Private), Limited, was formed in the year 1955, as an associate of the British Oxygen Company, Limited of London and others in Pakistan, Ceylon, Burma, Malaya, Hong Kong, Australia, Egypt, Canada, Africa

and New Zealand. It is a private limited concern having its registered office in Calcutta. The chief products of the company are oxygen and acetylene, which are vital for other industries. The total number of labourers employed in the company is 255.

INDIAN CABLE COMPANY, LIMITED.

This Company was floated in the year 1920 with an initial total issued capital of Rs. 27,24,000 and authorised capital of Rs. 30,00,000. The issued capital at present has been increased to Rs. 2.67 crores and the authorised capital is Rs. 3 crores.

The Company started production in the year 1923. The main products are copper wires and insulated cables for electrical purposes. Besides these, the Company also produces aluminium wires and strands, steel cored aluminium conductors, 'Copper-weld' wires and strands, cadmium copper wires and strands and fuse wires of all standards and types. Besides these, there are also other types of wires, which are produced.

Under the expansion scheme, the Rod Rolling Mill, Enamelled Wire Shop and P. V. C. Cable Shop have already been completed and are in full production. There is also a scheme of production of paper insulated power cables. Installation of machinery is almost complete and the Company expects to commence production shortly.

Starting with a total number of 400 employees, the present labour population of the Company has gone up to 2,000. After the completion of all the expansion schemes, the Company will be able to meet the total requirement of electric cables and wires for the whole of India.

INDIAN TUBE COMPANY, LIMITED, JAMSHEDPUR.

This Company was formed in the year 1953 as a limited concern with the collaboration of the Tata Iron and Steel Company, Limited and Messrs Stewarts and Lloyds, Limited. This was registered in the year 1954. It is at present spread over an area of 68 acres and fitted with most modern equipments for making welded and seamless tubes. It consists of (*i*) a continuous butt weld mill for the manufacture of gas, water and steam tube, ranging from ½" to 3" nominal bore (it incorporates a modern hot-dip galvanising plant and the full range of finishing equipment, including an up-to-date Socket Plant); (*ii*) a modern Cold Rolling Plant ; and (*iii*) an Electric Resistance Weld Tube Making Plant. A Fretz-Moon plant had been installed to produce 90,000 tons of commercial piping. A second Plant has gone into operation.

This mill will specialise in boiler tubing and cycle tubing of all specifications.

The total strength of the labourers at present is 915.

NATIONAL METALLURGICAL LABORATORY.

The National Metallurgical Laboratory is one of the chain of National Laboratories established by the Council of Scientific and Industrial Research in India to foster scientific research on an organised basis in different fields. This laboratory was opened by the Prime Minister, Shri Jawahar Lal Nehru, on November 26, 1950. The Laboratory is fully equipped on modern lines to undertake fundamental and applied problems and to serve as a central station for carrying out research on ores, minerals, refractories and ferrous and non-ferrous metals and alloys in relation to their application to indigenous metal industries.

Close collaboration is maintained with other research institutions and organisations of the Council, particularly on long term research projects of fundamental nature. Collection of data and technical information and dissemination of the results of scientific research to the industries tendering technical advice and undertaking specialised investigations, which are beyond the limits of the Government Test Houses, are amongst the many activities of this Laboratory.

Organisational Set up.

The research and other activities of the Laboratory are conducted in seven main divisions under the guidance of the Director of the Laboratory. Major industrial problems are entrusted to a group of research workers drawn from different divisions.

The various Research and other Divisions are General Metallurgy Division, Chemical Division, Ore-Dressing and Mineral Beneficiation Division, Physical Metallurgy Division, Extractive Metallurgy Division, Refractories Division, Mechanical Metallurgy and Testing Division, Low-Shaft Furnace Project, the Liaison and Information Division.

Research programme and progress achieved.

The Research and Development Programme of the National Metallurgical Laboratory is based in relation to the requirements of the First and Second Five-Year Plans and is wholly related to approaches of an applied character on problems calculated to be of industrial potential to the country. Certain problems of fundamental scientific value are being continued to be investigated, especially those that have often elicited commendable comments from top authorities in other parts of the world engaged on attacking identical problems.

The research and development programme. that are actively being pursued at the National Metallurgical Laboratory embrace :—

(1) Development of rationalised ranges of alloy and special steels for production in India, mainly on the basis of indigenous alloy resources. The object is to develop

new alloy steels which are not mere replicas of foreign standardised products but are based on indigenous alloying elements to meet the needs of Indian engineering and automobile industries.

(2) Development of electro-metallurgical processes for the production of manganese, manganese dioxide, chromium, magnesium, etc., from indigenous resources.

(3) Development of extractive metallurgical techniques based on fundamental thermodynamic theory—study of gaseous oxidation and reduction of mixtures and metallic reduction processes.

(4) Development of low alloy high strength structural steels.

(5) Development of permanent magnet materials.

(6) Development of high duty irons not essentially of nodular type.

(7) Development of alumino-silicate and silica refractories, carbon refractories, zircon refractories and other refractories from indigenous raw materials including development work on graphite crucibles, both clay and carbon bounded.

(8) Development of novel electroplating techniques on metals as well as on non-metals.

(9) Development and application of processes such as forging, rolling, wire drawing, etc., to the production of material not at present produced in India and required for research such as clad aluminium alloys, thermocouple wires, etc.

(10) Development of new analytical methods, chemical, microchemical and physical.

(11) Production of various types of ferro-alloys specially ferro-vanadium, ferro-chromium from indigenous raw materials.

(12) Study of the properties of foundry moulding sands, bounding materials and synthetic sand mixtures.

(13) Application of powder metallurgy techniques to different types of products.

(14) Ore-dressing and mineral beneficiation of Indian ferrous and non-ferrous ores including non-metallic source materials like vermiculits, gypsum, graphite, sands for foundry purposes, etc.

(15) Study on the corrosion and protection of metals.

(16) Study on the latest technique in the refining of steel by use of oxygen.

(17) Prodcution of iron in Low-Shaft furnace.

(18) Fundamental studies into isothermal transformation characteristics of Indian steels, heat-treatment cycles, grain-size control, structure of carbide in alloy steels, etc., as also investigations into atomic X-ray structure of metals and alloys.

The Laboratory's Role in the Five-Year Plans.

The First and Second Five-Year Plans lay great emphasis on the development of heavy and consumable industries and assessment of the mineral resources for their systematic utilisation and stepping up of their production, which, nature has given so generously to us. The country is, therefore, geared today for the tremendous expansion of her industrial potential in the basic metallurgical sector.

To sustain the expansion now taking place and to ensure a stable supply of raw materials to the fast expanding industries, it is necessary to expand the volume of mineral production and also direct our attention to the equally important task of developing suitable methods for the upgrading of poor quality ores and fines. It is estimated that for every ton of manganese concentrate produced from the manganese ore mines, an equal amount goes into waste in the form of low-grade ores and fines. Effective utilisation of these low-grade ores and fines by modern ore-dressing techniques for the production of high grade concentrates will easily help the country to expand the export of ores to earn foreign exchange which the country needs badly.

Development of new alloys to substitute those that are to be imported and likely to be stock-piled during exigencies of war, production of ferro-alloys for making high tensile heat, corrosion and wear resistant steels, evolution of new extractive metallurgical techniques for utilising indigenous raw materials and for conserving the limited reserves of coking coal by the use of non-coking coals to produce iron, new methods for metal finishing and inhibiting corrosion on metals and alloys, and production of basic refractories from indigenous resources to meet the demands of the steel plants, both in the public and private sectors, and of other metallurgical industries, are amongst the many industrial problems that are to be tackled to make India self-sufficient during the years to come.

The National Metallurgical Laboratory has duly recognised the importance of these aspects right from the inception by initiating extensive survey and intensive studies into the mineral beneficiation of Indian ores *inter alia* manganese and chromium.

The research and development work in general has further been streamlined, as stated earlier, to suit the requirements of Five-Year Plans in relation to mineral and metal development on the basis of the industrial policy of the Government of India to find effective uses for indigenous minerals and alloys and to find a substitute for those we do not possess. These efforts are now being stepped up *pari passu* with the development of metal industries getting into their strides under the stimulus of Five-Year Plan towards rapid development of heavy industries such as iron and steel, aluminium, zinc, lead, copper, etc.

Contribution of this laboratory towards the industrial expansion of the country has been by the way of (1) Production of Electrolytic Manganese Metal, (2) Production of Electrolytic Manganese Dioxide, (3) Development work on Refractories, (4) Production of substitute chromium-manganese-nitrogen Stainless Steel, (5) Aluminising of Steel, (6) Development of new techniques for plating metals on non-metals and brass plating of non-cyanide baths have been developed and considerable interest has been shown by the industries in India to exploit these processes, (7) The production of liquid gold using various additions and agents, the product comparing favourably with the imported variety (Foreign exchange to the extent of about Rs. 75 lakhs to Rs. 1 crore can be conserved once our research developments are put into industrial practice), (8) Production of steel by direct reduction of iron-ore (Another promising line of work undertaken is the 'cottage industry' production of steel by direct reduction of ore in charcoal to yield blooms weighing a few pounds which can be worked down by blacksmith), (9) Aluminium-silicon alloys (Alloys of aluminium-silicon have to-day attained considerable commercial importance in their wide use for multifarious applications and nearly 80 per cent of the world's production of light alloy castings has been estimated to belong to the family of these alloys), (10) Production of steel by "L. D. Process", (11) Low-Shaft Furnace Project (Bearing in mind the reserves of coking coal in relation to the expansion of iron and steel industry in India, the National Metallurgical Laboratory is now installing a 15-ton per day pilot Low-Shaft Furnace plant, primarily to investigate the possibilities of obtaining commercial grades of pig iron from fine grained or soft haematite iron-ores or other low grade iron-ores and non-coking high ash coals, coke breeze or other solid fuels like carbonised liginite, plentiful supplies of which are available in India but are unsuitable for smelting in the conventional blast furnace. Production of standard grades of ferro-manganese from low and medium grade manganese ores and non-coking coals is also envisaged).

A Review of Urbanisation in Jamshedpur.

The urbanisation of Jamshedpur was reviewed in 1957 by a survey undertaken at the instance of the Research Programme

Committee, Government of India. In the course of the survey an attempt was made to investigate into problems of the rapid urbanisation, employment opportunities, nature of migration, unemployment, housing and such other relevant factors.

The technique adopted for conducting the survey of households was stratified systematic random sampling. The houses were classified according to their structure and layout and samples were taken proportionately from each class.

The results obtained by the survey have not been different from the features described earlier in this and other chapters The survey, however, has underlined the heavy disparity in the sex ratio in the city--there being only 84.4 females for every 100 males. One-third of the population consists of children below 15 years of age and an average family consists of about 4.6 members. A little less than one-fourth of the population consists of earners and the rest are non-earners.

The number of unmarried percentage among the males and females is also intriguing. 53.81 per cent of the males and 47.12 per cent of the females living in the city are unmarried. This feature coupled with the fact that there is a heavy disparity in the sex ratio in the city will be a problem particularly among the heavy workers who want relaxation and have plenty of money to seek pleasures. It is unfortunate that the presence of a large number of unattached women labourers has not been helpful for the maintenance of a certain moral standard.

The survey has shown that 21.63 per cent of the males and 31.49 per cent of the females are illiterate. These percentages are better than the corresponding all-India percentages. Jamshedpur provides greater opportunity for employment among the literates and particularly those who are technically trained.

Inspite of an appreciable attempt on the part of the industrialists to provide accommodation to their working force hardly one third of the permanent staff has been provided with quarters. About 65 per cent of the houses accommodate one family each. The rest of the families live in houses which accommodate more than one family each and there are houses in which as many as 18 families live together. There are all types of houses, ranging from slum huts to air-conditioned bungalows. The percentage of *pucca* houses is 63 3.

55.61 per cent of the families live in a floor area of 40—159 square feet. 71.29 per cent of the houses have separate kitchens. Three fourth of the houses have open space around them and about the same proportion has electric installation.

The ratio between the immigrants coming from rural and urban areas is about 5:1. About 4.91 per cent of immigrants

have come from the district of Singhbhum itself while 24.25 per cent from the other parts of Bihar. 51.8 per cent of the immigrants are from other parts of India while 19.66 per cent of the immigrants are from foreign countries including Pakistan. The age structure of the immigrants shows that people migrate into the city mostly in the age-group 15—44.

Regarding the earnings, it has been calculated that 90.04 per cent of the persons earn less than Rs. 250 a month. People with technical qualifications earn much more. Jamshedpur also suffers from a certain incidence of unemployment, particularly because there is always a stream of people coming to Jamshedpur in search of employment. It is, however, a significant fact that the investigators did not come across a single technically trained man who was unemployed.

The survey of the shops and small establishments discloses that about 8.03 per cent of the persons living in the city are working in this sector. 46.77 per cent are proprietors or their family members and only 53.23 persons are other employees. 28.81 per cent of the shops and small establishments are run by one man each, another 47.12 per cent provide work to 2-3 persons each. 49.15 per cent of the establishments are retail shops while 8.14 per cent are hotels and restaurants. Only 11.15 per cent of the shops are accommodated in houses owned by the proprietors themselves while the Tisco and other concerns have provided accommodation for the other shops.

The earnings of the persons engaged in this sector differ widely. Roughly it may be said that the range is between Rs. 50 to Rs. 500 a month.

This is an analysis of some of the salient features of the urbanisation of Jamshedpur. Psychologically the population of Jamshedpur has got heightened sense of awareness and the awakening of the common man. The awareness has to be canalised and utilised for the common good and that will be the growing problem here with the passage of time. It is not a case of great urban population going forward at the expense of the common man but rather the common man building up the urban population going ahead.

The enormous growth of Jamshedpur has naturally made the place important for trade of various types. It is an important railway centre. There is a large turnover of consumer goods and Jamshedpur is probably the best shopping centre in Bihar. Besides the large industries mentioned before, the town has also a number of smaller industries. There are a large number of concerns engaged in making *biris*, sweetmeats and manufacture of soap, trunks, furniture, ice and ice-candy. There are also a number of printing presses. *

* The charts that follow show the urbanisation of Jamshedpur (P. C. R. C.)

Distribution of monthly paid employees according to provinces and communities as on 1st April, 1955 in Tata Iron and Steel Co., Ltd.

Province.		Hindus.	Muslims.	Christians.	Sikhs.	Anglo Indians.	Parsis.	Buddhists.	Total.	Percentage.
Bihar	..	9,249	1,565	527	2	69	4	..	11,416	36.16
Bengal	..	4,305	109	43	..	11	1	..	4,469	14·16
U. P.	..	1,969	724	9	3	6	3	..	2,714	8.60
M. P.	..	2,064	74	37	..	5	5	..	2,185	6.93
Orissa	..	3,488	680	72	..	3	..	..	4,217	13.36
Madras	..	2,196	171	138	..	7	..	..	2,512	7.96
Bombay	..	656	8	15	..	3	119	..	801	2.53
Punjab	..	323	52	1	1,289	..	..	..	1,665	5.27
Assam	..	28	..	1	..	2	1	19	51	0.16
Delhi	..	16	..	..	..	..	..	..	16	0.05
Other countries—										
Nepal	..	186	..	..	..	..	..	..	186	0.59
Pakistan	..	..	1,250	5	..	..	..	..	1,255	3.98
China	..	..	..	7	..	..	..	13	20	0.06
Goa	..	..	..	32	..	..	..	..	32	0.10
Other non-Indians		..	..	28	..	..	1	..	29	0.09
Total	..	24,454	4,633	915	1,294	106	134	32	31,568	
Percentage	..	77.46	14.67	2.90	4.10	0.34	0.43	0.10		

Distribution of weekly paid employees according to Provinces and communities as on 1st April, 1955 in Tata Iron and Steel Co., Ltd.

Province.				Total.	Percentage.
Bihar ..	..	..	..	3,619	53.35
Bengal ..	..	..	..	228	3.36
U. P. ..	..	..	..	336	4.96
M. P. ..	..	..	..	1,339	19.74
Orissa ..	..	..	..	879	12.96
Madras	..	..	..	240	3.54
Bombay	..	..	..	6	0.09
Punjab	..	..	..	102	1.51
Other countries—					
Pakistan	..	..	..	5	0.07
Nepal ..	..	..	..	24	0.35
Assam	..	..	..	5	0.07
Total			..	6,783	

Communities.	Total.	Percentage.
Hindus	6,069	89.47
Muslims	465	6.85
Christians	164	2.42
Sikhs	78	1.15
Anglo-Indians	3	0.05
Buddhists	4	0.06
Total	6,783	

JAMSHEDPUR AT A GLANCE.

The following information of a general nature may be of interest:—

1. Area of the town .. .. 25 sq. miles.
2. Area of the Tisco Steel Works .. 2¼ sq. miles.
3. Population, 1951 .. 218,162 (Census).
4. Labour Force (all concerns) .. 58,000 (approximate).
5. Production capacity of Tisco Steel Works—
   (a) Pig Iron .. .. 1.2 mill. tons per year.
   (b) Finished Steel .. 750,000 mill. tons per year.
6. Daily domestic water consumption .. 14 mill. gallons.
7. Daily water consumption in Tisco Works— 22 mill gallons.
8. Length of rail track within Tisco Works— 170 miles+40 miles under expansion.
9. Roads in town .. .. 150 miles.
10. Sewers .. .. — 135 miles.
11. *Pucca* storm water drains .. 100 miles.
12. Water mains .. .. 150 miles.
13. Telephones 26,000
14. Telephone calls per day 45,000
15. Co-operative Stores (Cloth, Grains, Oil Stores and Branches). 31
16. Co-operative Stores (Flour Mills) — 5
17. Co-operative Credit Societies .. 34

18. Schools:—

	Tisco.	Others.	Total.
(*i*) High Schools ..	4	10	14
(*ii*) Middle Schools ..	11	6	17
(*iii*) Primary Schools ..	25	47	72
(*iv*) Night Schools ..	8	..	8
		Total	111

19. School Children —

Tisco Schools ..	..	18,500
Aided Schools	..	5,000
Unaided ..	..	6,500
	Total	30,000

20. Tisco Technical Institute — Graduate Apprentice course, Trade Apprentice course, Night Technical classes, Employees' Training centre.

21. Colleges .. .. Jamshedpur Co-operative College, Jamshedpur Women's College.

22. Total capital expenditure on town — Rs. 6 crores.

23. Town Revenue Budget, 1952-53—

Expenditure ..	..	Rs. 110 lakhs.
Income ..	..	Rs. 50 lakhs.
Deficit ..	..	Rs. 60 lakhs.

24. Banks— State Bank of India, Bank of India, Central Bank of India, Bihar State Co-operative Bank, Punjab National Bank.

25. Post Offices—At present there are 12 post offices, distributed in various parts of the town. Jamshedpur Post Office is a Head Post Office.

26. City Booking Stations—One in Bistupur and one in Sakchi.

27. Total number of Taxis 190

Total number of Buses 37

Total number of Trucks .. 564

28. Masonic Lodges .. .. 2 Tata Logde.
Tisco loSde.

Theosophical Lodge—None.

Rotary Club .. .. One.

29. Foreign Liquor shop 8

Country liquor shops 6

30. Livestock figures according to 1951 census—

Cattle	.. ..	11,391 cows, bullocks, etc.
Buffalo	.. ..	3,095
Sheep	.. ..	338
Goats	.. ..	8,829
Horses and Ponies	..	106

31. Accommodation for casual visitors is available at *Dharamshalas*, Inspection and Dak Bungalows, Circuit House and Hotels with modern conveniences.

32. Temples for the Hindus and Parsis, mosques for the Muslims, churches for the Christians, *Gurudwaras* for the Sikhs exist. No churches for the Brahmos yet.

CHAPTER XVI.

ECONOMIC CONDITION.

A party of young students had got down the train at Kalimati station 35 years back. The party had to walk across a bridge which connected the railway station of Kalimati with the town commonly known as Sakchi or Jamshedpur. There were hardly five or six taxis and a few horse-drawn carriages. A sprinkling of porters were present at the station and the majority of the porters were Adibasi women. There were very few good roads in the scattered town. There was not much restriction in visiting the Steel Works. The town was small and the only beauty spot was the confluence of the two rivers commonly known as the Rivers' Meet. The number of private cars was limited to a dozen. The *hat* in the town was full of Adibasi men and women with bright flowers and leaves tucked in their hair who brought vegetables, chickens, eggs, etc., trudging about 15 or 20 miles. There was very little of shopping centres and the number of pucca houses was limited to a few hundred. Details of the growth of Jamshedpur will be found in a separate chapter on Jamshedpur.

The party had also visited some of the neighbouring villages. There were not many satellite concerns and the villages were of the same pattern that existed probably a century before. Many of these villages on the fringes have now disappeared. Cycles, torches and furniture were conspicuously absent in the villages. The villagers' property consisted of a few chattels and some chickens. They had very little land to cultivate and they depended on the works more for a subsidiary income. The villages were, however, extremely neat. The villagers were very hospitable and would impress everyone with their simplicity. There were very few buses connecting Kalimati railway station or Sakchi town. Trucks were still fewer. The neighbourhood was full of *sal* forests. There were patches of jungles within the town.

This was in a way the picture of Jamshedpur and the neighbourhood 35 years before. The picture was that of a town which was rapidly being industrialised and the rural areas, in spite of the impact of the industrialisation led an even orthodox tenor of life. Most of the labourers to the urban areas used to come from the neighbouring villages and the number of *bustees* or hutments for the labourers were limited to accommodate a few hundred only. The present picture of Jamshedpur and the neighbourhood is very different and typifies the changes in the economic condition of the district. Jamshedpur is now a highly industrialised city and the components of the population are the Adibasis of Chotanagpur, Biharis and men from all the other parts of India. The skilled technicians practically come from different parts of the world. Thirty-five years back the key posts in the Works were held by

highly skilled foreigners but now these posts are partially manned by equally highly skilled Indians. The recent two million ton expansion programme of the Tisco has brought a large number of men from different parts of Europe. The countryside has now much changed although the conventional form is still retained. The interior of the district also has not escaped the touch of modernism. Trucks and buses have opened up the interior.

Singhbhum was overrun by the British in the early part of the 19th century. For about eight decades the district continued an almost similar type of existence. There was very little of industrialisation although the industrial prospects were realised to be very great. Since the first decade of the 20th century when the Tatas started their Works there was a definite landmark. The different chapters in the book have traced the progress of the different aspects that count and make up life and no account of the economic condition of the district could be complete without a reference to those chapters.

A visit to Jamshedpur city alone will give a very wrong idea of the economic transition of the district. The highly industrialised city of Jamshedpur has to be treated separately and the chapter on Jamshedpur has given an analysis of the present population from the occupational point of view. The Adibasis still form the majority of the population of the district. Out of the population of 14,80,816 in the district according to 1951 census, the Adibasis count 7,13,522 souls.

Before the district was run over the Adibasis lived a predatory life and depended on the games, roots, fruits and herbs easily available in the forests. There was very little of cultivation and usually seeds were broadcast on the jungle ashes or into the soil after a mere scratching. By nature, they were allergic to lay by for the future or to take to cultivation. Ploughs were very few. The aboriginals of the villages who had ploughs could be counted at the finger's tip and held a higher status in the village economy. As a matter of fact, the first rental was fixed after the British occupied the Singhbhum district on the counting of the *huls* or ploughs. If a man would have one *hul* he had to pay, say, eight annas per year. If a man had two *huls* he would have to pay one rupee per year as rent. They lived an outdoor life filled up with hunting, music, dance and their liquor beverage brewed from *mahua* flowers or from stale cooked rice. The women were the more hardworking members. The Adibasi women have never shirked heavy work and even now a common sight at Chaibasa is to see Adibasi women pulling heavy rollers to pave the public roads and working at pulleys in the sinking of wells. This sight is uncommon in other districts of Bihar.

Agriculture still continues to be the main economy of the district. It is the main source of living for the majority of the

population of the district in spite of the opening up of a number of industries and extensive mining operations. The agricultural economy of the people depended in the past mostly on the rains. A drought or extremely heavy rains would affect the crops and bring in an acute distress. Whenever there has been an economic crisis due to the failure of crops the Adibasis have been very badly affected. Quick to spend the little they earn and with a confirmed allergism to save anything for the bad days the Adibasis have never been able to withstand any such crisis. They have silently suffered or widely emigrated in the past to meet such exigencies. The jungles were their domain and they were the free-booters of the spoils of the jungles. The common Adibasi has never been able to appreciate as to the necessity of conservation of the forests. His gods reside in the *Sarna* or selected *sal* forests or on the hills and they have to propitiate the gods with sacrifice of birds and animals. He yearns to hunt the fauna in the forest. Even to this day very few of the uneducated Adibasis realise that the jungles have been made almost a taboo from their depredation for their own good.

Floods are uncommon in this district. The rivers being hilly do not retain flood water for a long time. But there have been occasions when sudden heavy floods have caused a certain amount of havoc in the district. Within recent years there were heavy floods in 1920 in Manoharpur area when about 20 villages along the Subarnarekha river had badly suffered. In 1927 there was a heavy flood in Baitarni river which caused damages to the areas through which the river passes. In 1953 there was another flood in Subarnarekha river causing a certain amount of damage to houses and crops.

Droughts are more serious. Unfortunately severe droughts are not uncommon in this district. The drought in 1865-66 led to a widespread famine in 1866 throughout the district. The effects were not so strongly felt in Kolhan and the south-western parts of the district as compared with the north-western parts and especially Dhalbhum subdivision. This drought was followed by two other severe droughts in 1874 and 1897. The drought of 1874 affected Kolhan and Saranda *Pir* (division) and also Dhalbhum. The drought of 1897 was very severe and practically affected the whole of the Singhbhum district. Unfortunately there was another drought in quick succession in 1900 which affected the west of Singhbhum district including Kolhan Government estate and Porahat estate.

There were other severe droughts affecting the whole district in 1915-17, 1940-41 and 1942-43. The drought of 1915-17 was marked by an acute distress prevailing in the district of Singhbhum, and particularly in Kolhan Government estate. There was another smaller drought in 1935 affecting Sadar and Dhalbhum subdivisions.

The period after 1943 has been marked by several smaller droughts but in 1957 there was a very severe drought which had affected the entire State.

The repetition of droughts bring out the necessity of proper irrigation work with a view to conserve the available water. The rivers being hilly are not normally perennial and most of the irrigation works appear to have so far been done almost on the presumption that there will be rains. The drought of 1957, which had practically affected the whole State of Bihar, had been particularly severe on Singhbhum and underlines the necessity of linking up the irrigation programme without the presumption that there will be sufficient rains. Crops are still the gamble of the rains in Bihar as it was eight decades back.

There have been some drought periods when the Adibasis and other components of the population have been forced to eat unaccustomed jungle herbs, roots and even leaves. The records of the terrible scarcity in 1915-17 show that the Deputy Commissioner wanted to declare famine in the district and came to grief over this suggestion. Luckily, the neighbouring districts of Mayurbhanj and Keonjhar, now in Orissa, were surplus districts so far as the rice produce is concerned and in the past had been a help to the Singhbhum district in years of scarcity. The records also show that the present deficit district of Singhbhum had exported foodgrains in 1888-89 to the famine stricken people of the Central Provinces. The growth of population, the change in food habits, which has switched on to more consumption of rice as a mark of upgrading, the rapid industrialisation of the district, are some of the causes which have led to a precarious produce economy in Singhbhum district. The agricultural statistics reproduced elsewhere will show the lands available for cultivation. The available land for cultivation and the fertility of the soil do not favour much of expansion of cultivation. The large blocks of cultivable waste lands can only be put to cultivation at an enormous cost. Tractor reclamation is very costly and no mechanised reclamation of the waste lands in Singhbhum district will be useful unless simultaneously it is linked up with extensive and costly irrigation schemes. As a matter of fact, it is doubtful if any large scale tractor reclamation will be economically advisable for this district. A partial solution lies in a more intensive cultivation, proper rotation of crops and an attempt to raise more profitable crops.

It will be useful to give the comparative prices of the essential commodities in seer per rupee from 1910 to 1952. The 1957 price for the essential commodities is about 10 to 20 per cent higher, unless officially controlled. The comparative price for cloth is given in yardage. The price of commodities in 1900 may be taken as almost the same as the price in 1910. The chart below will show how the price of the essential commodities has

shot up in this district. But in appreciating the rise in the prices one has to remember that there has been a great industrialisation and very much higher wages are now common. With more circulation of money and its inflation, the purchasing power of the rupee has been very considerably slashed down.

Comparative price of essential commodities in seer, per rupee (Chaibasa Town).

Kind of commodities.	1910.	1932.	1942.	1952.
1. Common rice	20 srs. ..	16 srs. ..	6 srs. 6 chs. ..	1 sr. 8 chs.
2. Wheat ..	16 srs. ..	16 srs. ..	6 srs. 4 chs. ..	2 srs. 8 chs.
3. Gram ..	16 srs. ..	16 srs. ..	6 srs. 4 chs. ..	2 srs. 10 chs.
4. Salt ..	32 srs. ..	12 srs. ..	9 srs. 8 chs. ..	8 srs.
5 Gur ..	12 srs. ..	6 srs. ..	4 srs. ..	2 srs.
6. Mustard and Mahua oil.	4 annas per sr.	8 annas per sr.	1 rupee per sr.	Re. 1-8-0 to Rs. 2 per sr.
7. Fish ..	4 annas per sr.	6 annas per sr.	1 rupee per sr.	Re. 1-8-0 to Rs. 2-4-0 per sr.
8. Meat ..	4 annas per sr.	8 annas per sr.	1 rupee per sr.	Rs. 2 to Rs.2-4-0 per sr.
9. Eggs ..	2 eggs per pice	2 pice each ..	1 anna per egg	2 annas per egg.
10. Chickens weighing about 16 ozs.	3 annas ..	6 annas ..	12 annas ..	Re. 1-8-0
11 Coarse cloth.	8 yds. ..	6 yds. ..	3 yds. ..	1 yd.

Population and Density.

The total population of the district, according to 1951 census, is 14,80,816 out of which 7,52,424 are males and 7,28,392 are females. The corresponding figures for 1941 census were 13,50,141 (total population)-- 6,82,757 (males) and 6,67,384 (females). The area of the district, according to 1951 census, is 4,475 square miles to which there has been an addition of 677 square miles with a population of 2,20,734 persons, as mentioned in the chapter "Physical Aspects". The density of population, according to 1951 census, is 331 persons per square mile as against 302 persons per square mile in 1941. Considering that the forests and hills cover

a very large area, the present density of 331 persons per square mile appears to be quite heavy and the district may be said to be overpopulated. This becomes more apparent when we consider the fact that in plains well over 65 per cent of the total area is cultivable, while in this district, according to the Bihar Statistical Hand-Book of 1953, the cultivable area comes to only about 43 per cent of the total area of the district. Even this computation is on the liberal side and includes border-line waste lands. Another relevant point in this respect is this that the number of agricultural classes per acre of the area shown in this district is 1.7 as against 1.6 for the State as a whole.

Emigration and Immigration.

Emigration and Immigration form an important feature in the district affecting the economic trends. Generally speaking emigration is common if there is a period of distress. The exploitation of the minerals and the industrial expansion have encouraged wide immigration. It has been mentioned in the chapter "The People" that the total number of immigrants in the district, according to the census of 1951, was 1,92,413. The same trend has continued. Definite figures for emigration for the recent years are not available. The growing tempo of the emigration trend has definitely abated with the availability of employment within the district. But still a good number of people from this district go to the tea gardens of Assam and to adjacent States or to other districts in the State to earn their livelihood. But there is definitely more of immigration than emigration now.

Village Organisation.

Regarding village organisation, which is so intimately connected with the economic condition of the people, the Old District Gazetteer of Singhbhum (1910) mentions :—

"Both among the Hos and the Mundas the old system of village communities still survives. The villages are grouped in unions called *Pirs*, a name which is probably the Mundari and Ho word *piri* meaning upland. The term was originally applied to a group of villages, usually seven to twelve in number, under the jurisdiction of a single leader, called a *manki*, who probably was a lineal descendant of the leading settler in the chief village in the group. These groups now often contain many more than twelve villages, and one *Pir* may have more than one *manki*. For instance, in the Kolhan there are 26 *Pirs*, but there are 73 local divisions each under a *manki*, while in Porahat, where there are 10 *Pirs*, Durka and Bandagaon *Pirs* are each under three *mankis*.

"The *manki* is the divisional headman who is responsible for the rent of the villages, to Government in the Kolhan and to the

zamindar in Porahat. It is his duty to supervise the *mundas* or village headman to look after roads, boundaries and forests, and to perform certain police and other duties. The village headman is the direct representative and manager of the village community. He collects the rental of the villagers and pays it over to the *manki* and generally performs the same functions for the village that the *manki* does for the union. In the Kolhan the headman is known as *munda*. In Porahat, in Ho and Mundari villages, he is called *munda*, in Goala and Kumhar villages *pradhan*, in Kurmi villages *mahto*, while Bhuiyas and Birwals, Santhals, Bhumij and Rautias are called respectively *naek*, *manjhi*, *sardar* and *gonjhu*. The difference of name does not in itself connote any distinction in the nature of the office. Where internal distinctions exist, they are due to tribal customs, for with the rarest exceptions, all villages by whatever caste created, have been reclaimed from jungles for cultivation by the members of the reclaimer's family, and not that the reclaimer may be landlord and collect rents.

"In Dhalbhum the headmen of villages are called *pradhans* and appear originally to have been members of the aboriginal races, such as Santhals, Mundas and Bhumijs. The land having been cleared and a village community formed, the superior tenure-holder assessed the land to rent, and appointed as *pradhan* the chief member of the family that founded the village. The aboriginal *pradhans* are, however, now being supplanted by non-aboriginals, chiefly Bengalis, from Midnapore and other adjoining districts The *pradhan* is now the lessee of the village, who collects the rent for the zamindar and is remunerated either by a grant of land held *man*, i.e., rent free, or by a percentage of the collections. He also has to assist in bringing offenders to justice and to meet demands for supplies and free service. He is generally assisted by a deputy called *paramanik*."

This type of village organisation though parochial was excellently suited to the genius of the Adibasis. Of simple and trusting nature, the Adibasis wanted a buffer, a sort of protection and an agency between them and the Administrator. The Ho rebellion in 1833-34 emphasised on the fact that the time honoured institutions could not be set at naught so easily. The early British Administrators had realised this to some extent and the famous Wilkinson's directive, which was given as the code of administration to the first British administrator Tickell, envisaged a benevolent administration which did not erode into Adibasi mind. But with the passage of time, this system of village organisation with *manki* and *munda* was found to be ineffectual and not very well suited to the changed circumstances. The police thana system was at first exotic, but grew to be useful, struck roots and was appreciated. The spread of education and communication brought the Adibasis nearer to the main currents of modernism. The new

phase of industrialisation which started in the first decade of the 20th century became the turning point. That tremendous incidence of nervousness, which met the first British administrators, had melted away. The first phase of hesitation had melted away.

The changes leading to the economic upheaval of the district was shared fully by the indigenous population of the district. Since the Adibasis were not singularly obstinate and cunning, the power of their minds could be slowly eroded and conventionalised by competitive demands. By education, communication, better administration, contact with the outer world through railways, mechanised transport, immigration, newspapers, electric lights, telephone, radios, moving pictures, etc., their minds were assailed and destructed. The effects of outer world could no longer be prevented. The time was opportune in recent times to change and to adjust their village organisations.

The Adibasi institutions could not be treated as relics for the museum, but they had to be properly adjusted and attuned to the administrative changes in other parts of the State. That is why the institutions of Gram Panchayats and Anchals were not withheld from being introduced into Singhbhum district. Side by side with welfare measures these institutions described elsewhere have helped the indigenous population to fully utilise the economic changes within the district.

IMPACT OF URBANISATION.

In 1910, there was only one town in the district, namely, Chaibasa. Since then a number of towns or townships have grown in the district on account of the establishment of industries and exploitation of mineral resources. According to the census of 1951, there are 10 towns in the district. These towns have attracted a sizable population from the rural areas of the district to work in the factories. Besides working in the factories, a fair percentage of the people are engaged in the ancillary services like transport, communication, shops, hospitals, etc. One particular feature of the rural Adibasis coming to the town is that they usually come with their families if they have to stay for any long period. Their wants are usually simple and they can eke out an existence under very rudimentary circumstances. Children have grown up to adult age living in small huts carved out of the stacking of bricks or from temporary huts made of leaves near the work site. The Adibasi women being used to hard work are also readily accepted as labourers at the work sites. The mineral exploitation of this district does not envisage the employment of underground labour. That is another reason why the women folk of the Adibasis have an economic value at the work sites. The impact of urbanisation in rural areas has been tremendous. The Adibasis, who were once allergic to modern

civilization, are now in contact with their colleagues from non-Adibasi areas who usually have a better mode of life. This has helped the Adibasis to upgrade themselves. During the last two wars the Adibasis were recruited in large numbers to the ranks of Sappers and Miners and in other sections. They earned a lot in building up aerodromes and other installations in connection with the war. The Steel Factory had very prosperous days and paid their labourers extremely well. The large number of emigrants to the tea estates in Assam and elsewhere also brought back to the villages a better mode of living. The housing and household condition in the villages were considerably upgraded by these factors.

Other Factors.

Some of the other factors which have brought in a climate of upgraded economic status to the villages are the expansion of railways and other means of communication. A century back the district was extremely backward so far as road communications were concerned, not to speak of the railways. Dalton, the Commissioner of Chotanagpur Division, came to know of the insurrection in 1857 about five weeks after the sepoys had revolted at Chaibasa. At that time Dalton had removed himself from Ranchi to Burhee on the Grand Trunk Road. This fact will show how very poor the road communications were. At the moment the district has got a network of good roads to the mileage of 2,066. The railways were opened for the first time in 1890 and new sections have been added from time to time. Before the territorial adjustments were made in 1956 there were 233.847 route mileage and 439.100 track mileage in the district. Another legth of about 10 miles of railway line has been added on account of the transfer of Chandil police-station from the previous Manbhum district to Singhbhum district in 1956. During the First Five-Year Plan, railways were extended and the line between Rajkharsawan and Barajamda was doubled and the construction of another section was taken up to connect Noamundi and Banspani. This section has been thrown open for traffic in May, 1958. The expansions have been necessitated for the quicker movement of iron-ore to feed the three big steel factories at Jamshedpur, Burnpur and Durgapur. The two existing steel factories are undergoing great expansions and Durgapur in West Bengal is going to have a full-fledged steel factory in the near future. The station yards of Rajkharsawan, Dangoposhi, Barajamda and Gua have been remodelled for the quicker transhipment of iron-ore. Another railway line in the offing is to connect Ranchi with Rourkela in Orissa where there will be another great steel factory. This area will also open up some portions of Ranchi district where rapid industrialisation is likely to take place.

The economic condition of the people has also been upgraded by the great expansion of the postal communication. Through

the post offices money orders worth lakhs of rupees have poured into the district in the course of the last decade. In 1910 when the Old District Gazetteer was published, there were only 31 post offices and 2 telegraph offices in the district with only 150 miles of postal communication. At present there are 107 sub and branch post offices besides the head post office at Jamshedpur and 15 telegraph offices and 580 miles of postal communication. Tele-communication did not exist in 1910 but now there are altogether 17 exchange systems, 14 public call offices and about 3,000 connections in the district. Aeroplanes are no longer a novelty to the interior of the district as there are now four air strips in the district at Chakulia, Chaibasa, Noamundi and Jamshedpur. The second great war had not only expanded the industrial centres but had also thrown the entire country side into a vortex of excitement and improvement. The labourers for the construction of the air-fields and the other military and civil installations were drawn from the villages. All that, not only brought a good deal of liquid money to the villagers but also gave them an idea of the changing world.

Occupations.

The occupational pattern in the district is a good indicator of the economic incidence of the people. In a separate chapter on Jamshedpur the occupational trends in that great steel city have been discussed. To appreciate the occupation trends in the rural areas one has to turn to the District Census Hand-Book for Singhbhum published in 1957 with the background of the previous census reports and tables. The table below indicates the extent of the components of agricultural, industrial, commercial and professional population per thousand of the district population in 1911 :—

Agriculture.

Population supported by agriculture	5,54,621
Proportion of agricultural population per thousand of district population	799
Percentage on agricultural population of actual workers	58
Dependents	42

Industry (Including Mines).

Population supported by industry.	30,243
Proportion of industrial population per thousand of district population .. .. —	44
Percentage on industrial population of actual workers	52
Dependents .. — .. —	48

Commerce.

Population supported by commerce	25,842
Proportion of commercial population per thousand of district population	37
Percentage on commercial population of actual workers	52
Dependents	48

Professions.

Population supported by professions	3,075
Proportion of professional population per thousand of district population	4
Percentage on professional population of actual workers	48
Dependents	52

Agricultural population is represented by ordinary cultivation and the growing of special products and market gardening, the industrial by extraction of minerals and industry, the commercial by transport and trade, and the professional by professions and liberal arts.

It may be of some interest to mention here that the percentage of agricultural population in Singhbhum district according to the census table of 1911 was more than that in other districts in South Bihar and the percentage of industrial population was less than in other districts of South Bihar.

The figures for the 12 occupational sub-classes according to the census table of 1931 are as follows :—

Total 1,000.

1. Non-working dependents	664
2. Working dependents	12
Earners—	
3. Without a subsidiary occupation	281
4. With a subsidiary occupation	43

Number per mille of total population occupied in—

I. *Exploitation of animals and vegetation*—

5. As earners (principal occupation) and working dependents	288
6. As earners (subsidiary occupation)	24

II. *Exploitation of minerals*

7. As earners (principal occupation) and working dependents	7
8. As earners (subsidiary occupation)	2

III. *Industry*—	
9. As earners (principal occupation) and working dependents	46
10. As earners (subsidiary occupation)	7
IV. *Transport*—	
11. As earners (principal occupation) and working dependents	7
12. As earners (subsidiary occupation)	2
V. *Trade*—	
13. As earners (principal occupation) and working dependents	12
14 As earners (subsidiary occupation)	2
VI. *Public force* —	
15. As earners (principal occupation) and working dependents	1
16. As earners (subsidiary occupation)	0.7
VII. *Public administration*—	
17. As earners (principal occupation) and working dependents	0.3
18. As earners (subsidiary occupation)	0.1
VIII. *Professional and Liberal Arts*—	
19. As earners (principal occupation) and working dependents	3
20. As earners (subsidiary occupation)	0.8
IX. *Persons living on their income*—	
21. As earners (principal occupation) and working dependents	0.04
22. As earners (subsidiary occupation)	..
X. *Domestic service*—	
23. As earners (principal occupation) and working dependents	4
24. As earners (subsidiary occupation)	0.3
XI. *Insufficiently described occupation* -	
25. As earners (principal occupation) and working dependents	27
26. As earners (subsidiary occupation)	5

XII. *Unproductive*—

27. As earners (principal occupation) and working dependents 1
28. As earners (subsidiary occupation) 0.09

In order to have a comparative view of the figures of 1911 and 1931, it is necessary to add in one group the figures for minerals and industry and in another that of trade and transport.

It is apparent from the figures of 1931 that the number of dependents comes to nearly 200 per cent of the working population which also includes working dependents. Taking into consideration the number of dependents, the total number of persons depending on agriculture per thousand of district population in 1931 would come to about 751, which is less than the figure of 799 for 1911. The corresponding figures for Industry and Commerce and Professions and Liberal Arts would be about 185, 69 and 9 in 1931 as against 44, 37 and 4, respectively in 1911. These figures suggest a turn from agriculture to industry and commerce and other occupations. The increase in the industrial population has been more than four hundred per cent, in the field of commerce nearly two hundred per cent and in the field of profession more than two hundred per cent. It may also be interesting to mention here that in 1931 the pressure on land in Singhbhum district was less than any other districts of South Bihar and unlike this the industrial population was greater than any other districts of South Bihar.

The occupational figures as disclosed in the census tables of 1951 indicate that the district has had substantial changes since 1931. The occupational figures on the basis of the census table in 1951 are as follows:—

1. Agricultural classes per thousand persons of general population 748
2. All non-agricultural classes per thousand persons of general population 252
3. Persons engaged in production (other than cultivation) per thousand of general population .. 153
4. Persons engaged in commerce per thousand of population 30
5. Persons engaged in transport per thousand of general population 12
6. Persons engaged in other services per thousand of general population 57

A comparison of the two sets of figures of 1931 and 1951 will show that the proportion of agricultural population had already started a decline.

The great increase in the population of the district from census year to census year is also a considerable factor. During the period 1911 to 1951 the population of the district had increased by about 35 per cent excluding the population of Seraikela and Kharsawan which had not been taken into consideration in computing the agricultural and non-agricultural population at the census of 1931. These areas were included in the district only in 1948. The increase in the population between 1931 and 1951 comes to about 59 per cent including the population of Seraikela and Kharsawan. The gradually rising population of the district during 1931 to 1951 must have affected the ratio of agricultural and non-agricultural population. But taking an overall picture it may not be unsafe to say that nearly 75 per cent of the population depends on agriculture. The industrialisation that has taken place and the industrial potentialities of the district have not yet been able to upset the balance in favour of the agriculturists. The following figures based on a survey conducted by the Central Bureau of Economics and Statistics will give a closer idea of the agricultural economy of the district as compared to the State as a whole :—

——	No. of persons of agricultural classes per acre of sown area.	Aggregate value of produce in lakh rupees.	Gross agricultural income per head of agricultural production*.
Singhbhum ..	1 7	8,32	751
State	1·6	2,38,45	681

The rapid industrialisation of the district has also slightly upset the proportion of males and females. In 1911 there were 1,035 females to every 1,000 males as against 968 women to every 1,000 males in 1951. According to the census of 1951 there were 6,213 unmarried males and 3,110 unmarried women in the age-group 15—24 which is the popular age-group for marriages. It, however, has to be mentioned that the proportion has been upset by the population in the urban industrialised areas. The big industries have attracted mostly unattached males. If married, many of them cannot bring their wives because of the expenditure it will involve or housing difficulties. If unmarried, the males do not find suitable brides in their field of work. This factor may not be conducive to a morally clean life but this is not an unusual feature in the industrialised urban areas.

Picture From 1909

The Annual Land Revenue Administration Reports since 1909 are useful for drawing a picture of the many changes, cross currents and land-marks that have affected the economic condition of the district.

*Figures for value of produce and agricultural income take into account the output of 19 crops covering 88 per cent of grown area valued at 1946-47 price level.

The year 1909-10 was a landmark. The new Kalimati-Gurmahasani railway line was under construction. The installations of Tisco Steel Works at Sakchi were going on in full swing and a new phase of the mining operations in different parts of the district were on. There was a good harvest. The new projects attracted the agriculturist labourers which they could readily have because of a good harvest. The monthly wages in this year of landmark for the agricultural labour, unskilled labour at the projects, blacksmith and carpenter were Rs. 6, Rs. 8, Rs. 19 and Rs. 15 respectively. There was a decline in emigration and recruitment of coolies for the tea gardens at Assam and other places. The annual recruitment figure showed 2,055 as against 4,454 in the previous year. This fall was a good indicator of the economic prosperity within.

In 1910 and the year following the Works of Tisco at Sakchi, Bengal Iron and Steel Company's mines at Duia (Saranda) and Cape Copper Mines at Matigara continued attracting more and more labour which meant an improvement in their material condition. In 1910 the working of Tisco started giving employment to about 1,000 workers, both skilled and unskilled. The census of 1911 marked a growth of population. But while the labourers commanded more wages, the middle classes who depended on services started feeling the effects of the increase in the cost of living which the beginnings of quick industrialisation had brought in.

In 1911-12 Lord Crew, Secretary of State and the Lieutenant-Governor of Bengal, visited the Works at Sakchi. The Lieutenant-Governor assisted at the first process in the manufacture of steel in the plant entirely from its own material. Mr. Cook, the Deputy Commissioner, had reported —

> "The works are now launched and it remains to see that result. If success attends the efforts, the benefits will be widespread, but this district should reap a large harvest. Other industries connected with by-products must settle in the neighbourhood of the Works. All this means more money in the district, a portion of which will be distributed among the poorer classes. It will mean, in all probability, that the poorer *raiyat* will discard agriculture and his place will be taken by outsiders with improved methods."

It may be mentioned that while the first part of the observations holds true, the second part does not. In spite of the industrialisation that has followed in the five decades since Mr. Cook wrote, agriculture still remains the main livelihood of the people and has not passed on to "outsiders".

The industrialisation brought in money-lenders, traders and other professionals to the district. It was felt that there was

a tendency on the part of the more intelligent and the richer sections, who were mostly immigrants, to buy up the lands of the aboriginals and other poorer sections of tenants. There was a clear tendency for holdings to get into the hands of a smaller number of tenants. This was partly due to the defect in dealing with unsanctioned mortgages and disposal of the property by the civil courts after decree. The administration was faced with the problem of giving some relief to the agriculturists, aboriginals and other poorer sections. As a class, the aboriginals do not look forward and would keep by any resources for the rainy day. Restrictions on the transfer of *raiyati* holdings had been introduced in the Chotanagpur Tenancy Act in 1903 with the object to stop sale of *raiyati* holdings by improvident *raiyats* and to restrict all forms of mortgages and thereby save the aboriginal population from becoming serfs by money-lenders. It was noticeable during the year 1912-13 that the average value of the security on mortgages instead of diminishing, since restrictions on transfer were imposed, had increased considerably. The security value of *don* lands had, in fact, risen to Rs. 61-4-0 per acre from Rs. 39-4-0 which was the feature before. Executive steps were taken to tighten up the enforcement of the restrictions.

The material condition of the people from 1913 to 1915 had improved. The harvest was good and there was steady development in the industries and the undertakings of a large number of public works. Tisco's Works, the Cape Copper Mines at Matigara and the Iron Mines in Manoharpur and several stone and lime quarries continued to employ a large number of labourers. Most of the labourers were men of the district, who gave their labour on seasonal basis without neglecting their agricultural operations. The road from Bandgaon to Jaintgarh, a distance of 84 miles, was constructed by the Public Works Department. A number of school buildings and pucca private houses were built in the town of Chaibasa and elsewhere. There was a fall in the emigration figures to Assam. The economic prosperity of the population in connection with the industrial expansion, trade and commerce was apparent by the growth of the *melas* and fairs and a larger turnover of consumer goods at the *hats* and *melas*.

The Works of the Tatas were expanding. The Works of the Company at that time consisted of (1) Coke ovens, (2) Blast furnaces, (3) Steel Works, (4) Rolling mills, (5) Power mills, and (6) Ice Soda Plant. The Company's net profit during the year ending the 30th June 1913 amounted to Rs. 8,58,583. Pig iron and steel from Sakchi were finding their way to all parts of India as well as to Japan, China, Java, Straits Settlement, Australia and the United States. The Bengal Iron and Steel Company had also a prosperous year. They had opened up extensive quarries on the summit of Pansiraburu, which were in full operation. The

annual *mela* at Chaibasa received a much higher turnover of consumer goods, cheap ornaments and cloth. Definitely, the standard of the people was improving and they were developing new wants, better mode of living and housing conditions.

The spending climate in the district was more favourable. There was, however, an unfavourable climate for investment of the surplus money obtained from higher wages. The price level of the essential commodities was slightly higher than the price level in 1910 quoted elsewhere. The labourers spent a lot of their wages over drinking liquor, better clothes, cheap ornaments but did not utilise it to liquidate debts or to buy lands or livestock or improved ploughs as a sound investment.

The year 1915 and the two following years were a period of distress for the common man. Rainfall was very scanty and badly distributed. Acute scarcity conditions prevailed as there was a singular failure of crops. Test works were opened and gratuitous relief was given. On the 2nd October, 1915, famine was formally declared in the Kolhan estate.

But peculiarly enough, while serious scarcity conditions existed, there was a steady progress so far as industrialisation was concerned. In spite of the high level of prices of the essential commodities the workers at the steel factor and the other concerns were not affected. They had to be kept satisfied with good wages supplemented by subsidised food stuff. The Tata Iron and Steel Company opened two new furnaces and the company's net profit during the year ending the 30th June, 1915 amounted to Rs.24,83,088-15-8 as against Rs 22.63,778-12-3 in the previous year. The Bengal Iron and Steel Company, Ltd., also made steady progress at Panisura-buru In 1915 they despatched 1,37,233 tons of ore from Panisura-buru as against 1,20,552 tons in the previous year. In this year the first motor service between Chakradharpur and Chaibasa was opened by private enterprise. This motor service paved the way for other enterprising men to run motor services.

The other class of men besides the cultivating class and agricultural labourers that were hard hit consisted of the men with a fixed income. It was a difficult problem for them to meet their daily expenditure. Many of them were even forced to take relief under some shape or other. The outbreak of First World War was a boon for the Tatas. Considerable extensions of the works were sanctioned and since August, 1915, Tisco were engaged in the supply of steel for the manufacture of shells and other munitions. As a matter of fact, the greater demand of labour by the Tisco, the Cape Copper Company and the iron mines at Duia was a great stand-by in these years of agricultural distress. Larger number of landless labourers and also cultivating labourers flocked to these concerns in search of employment.

The following years till 1920 the Tatas, the Cape Copper Company and some of the other industrial concerns made great profit and considerably extended their works. Unfortunately, the country was not prepared for such heavy demands on them and there was an acute dearth of skilled men. A great opportunity it was to modernise the Steel Works. For the year ending the 30th June, 1916, the net profit of the Tata Iron and Steel Company at Sakchi showed a remarkable rise from Rs. 24,00,000 to Rs. 68,00,000. Tatas were supplying munitions and shells for Government and steel for the manufacture of shells and rails for Mesopotamia, North-West Frontier and Egypt as well as for the Indian Railways. The gold mine of the Dhalbhum Gold and Minerals Prospecting Company at Kudarkocha turned out 979 ozs. of bullion of a value of Rs. 59,658. Chromite of good quality was extracted near Chaibasa during this year. A number of applications for prospecting licenses and mining leases for white clay, red and yellow ochre, chromite, manganese, etc., were granted.

In the year ending June, 1917, the Tata Iron and Steel Company made a huge profit of Rs. 1,11,00,000 against Rs. 68,00,000 in the previous year and Rs. 24,00,000 in the year before. In 1917 the Cape Copper Company had completed the erection of a smelting plant, but experienced great difficulty in obtaining skilled workmen and adequate coal. There was a heavy demand for coal by the Government. Railways and Steel Companies. The chromite deposits in the Kolhan were examined in the Geological Department, Government of India, as the demand for chromite was increasing.

AFTER THE FIRST WORLD WAR.

The depression in agricultural economy had turned the corner by 1920. There was a well balanced rainfall and the produce was good. Coarse rice sold at 5½ seers to 6 seers a rupee. Emigration fell in comparison to the emigration figures of 1919. The pre-war rates of prices of the essential commodities were not restored but this was not due to the bad harvest. There was a rise in the earning capacity of the working class and the rates of wages went up much higher. Labourers who were getting 4 annas per day only two years back started refusing to work for anything less than 6 annas a day. The Tatas and the mining concerns readily paid from 9 annas to a rupee per day to the ordinary unskilled labourer. The rates of the wages given by the District Board and the Public Works Department had to be increased by 20 to 33 per cent.

The period of agricultural prosperity continued till 1930 as there was a succession of good harvests and hardly any need for agricultural loan. After several years in 1928-29, the Government land revenue collection made was approximately cent per cent a remarkable achievement that was possible only if there was

sufficient money for the agriculturists. The other smaller industries on which quite a large number of inhabitants depended, such as, lac, tusser, *sabai* grass and hides, etc., also had improved. In 1928 the Agent for the Columbia Record Company, one of the largest lac consumers in the world, paid a visit to Chaibasa. The Imperial Forest Survey and the Department of Commercial Intelligence were at Chaibasa in 1928 for making detailed enquiries regarding lac.

So far as the Tata Iron and Steel Company was concerned, Government came to their aid by giving assistance in the anticipated slump that followed the boom years of war production. Government also gave substantial loan to the Indian Steel and Iron Produce Company under the Aid to Industries Act. The Enamelled Iron Ware Company and the Cape Copper Company could not, however, work profitably. While the Cape Copper Company was not able to improve their position the sister Company of Cordoba Copper Company made good progress. Some of the companies working on chromite had internal disputes and the Dhalbhum Gold Mining Syndicate was in liquidation. But the factory hands, who were discharged from these concerns, had no difficulty in getting jobs elsewhere. There was a great demand for the skilled and semi-skilled labour.

This is the period when the labour movement was being organised. As usual the first few years of the labour movement showed a certain amount of want of clear thinking and there was a bid for leadership. This aspect has been described in a separate chapter. Jamshedpur saw a very big and prolonged strike in 1927-28 which was led by Sri Subhash Chandra Bose, one of the great Indian leaders.

The level of prosperity was shown by the continued ease with which the demands for revenue, cess and loans were made. There was more consumption of consumer goods. Better type of clothes, lanterns, cycles, torches, soaps, cheaper type of cosmetics, shoes, underwear and cheap trinkets were more in demand. The *hats* and *melas* flourished. There was more expenditure on amusements and in the liquor shops. There was practically no emigration from the district. No case of desertion of the land by the tenant in any part of the district was reported from 1928 to 1930.

Among the other industries that were making a headway, mention may be made of *biri* making and business in timber. Chakradharpur became the centre for the making of *biris* and their onward transmission. The Bengal Timber Trading Company ran some of their saw mills and employed a large number of men. The *sabai* grass industry also recorded progress. With the improvement of communication, more buses for passenger traffic and carrier trucks for the carrying of finished goods, timber and other merchandise came into operation.

By 1930 Jamshedpur was one of the best towns with modern amenities in India. Urbanisation of other areas was also another remarkable feature in these years of prosperity. Besides Jamshedpur, a number of new towns, such as, Gua, Noamundi and Jamda grew out of the mining developments. With the expansion of the railways, Chakradharpur, Manoharpur, Sini and Rajkharsawan had developed. Every *hat* and *mela* had a number of *pan-biri* shops, shops for aerated coloured water, restaurants that sold tea and biscuit and miscellaneous shops dealing in glass bangles, hair-oil, electric torches, enamelwares and other household articles. The urban areas came to have static shops. Shopping centres loaded with tit-bits necessary for the more affluent class grew up.

The world-wide depression in trade from 1930 onwards continued for a few years and had its effect on the steel and other industries in this district. As these industries had become a part of the economic life, the slump reacted on the population depending on the industries. The Tata Iron and Steel Company, Ltd., could not work in full operation due to a slump in the sale of the products. The Bengal Iron Company was obliged to close down their mines while the Indian Iron and Steel Company, Ltd. and the Indian Steel Wire Products Company had to work with restrictions. There was a depression in the manganese and shellac market. The rice mills were also affected. But the *biri* industry continued to flourish as the consumption of the finished product was in States other than Bihar. The Indian Copper Corporation was, however, not affected.

The improvement came in 1935. The Tata Iron and Steel Company, Ltd., could make some additions to the plant and rebuilt one of the blast furnaces to increase the output of pig iron. There was an installation of special equipment for the production of high tensile steel. The Indian Copper Corporation, Ltd., maintained an increased output both for copper ore and refined copper. The Indian Iron and Steel Company, Ltd., started working its Gua ore mines. The Bengal Iron Company, Ltd., constructed a second blast furnace. There was a great demand for the Indian insulated cables with the result that the output of the Indian Cable Company increased. The Tinplate Company of Jamshedpur worked more tons of steel in this year. The slump had almost passed off. There was definitely a higher demand in the world market for some of the minerals of Singhbhum district. The importance of Singhbhum district for the mineral products had come to be realised.

From 1937 onwards there were a series of strikes and a wave of labour unrest. More details of the labour unrest will be found in a separate chapter. It may only be mentioned here that the strikes brought in more of temporary financial loss to the workers but ultimately gave more privileges for them. The position of

the labour had definitely changed and the labour realised that if united they could almost dictate their demands. The labour upheaval needed proper leadership.

In spite of the labour unrest and strike in 1937-38 the Tata Iron and Steel Company despatched 5,42,697 tons of iron-ore from their mines of Noamundi. The total production of pig iron-ore and saleable steel came to 9,21,300 and 6,60,378 tons respectively against a monthly average of 70,000 and 54,000 tons, respectively in the preceding year. The Bengal Iron Company, which had amalgamated with the Indian Iron and Steel Company, Ltd., worked their mines both in Gua and in the Ankua Valley and railed 4,22,370 tons of iron-ore. The other concerns of Jamshedpur, namely, the Indian Copper Corporation, the Tinplate Company of Jamshedpur and Jamshedpur Engineering and Machine Manufacturing Company, Ltd., also worked satisfactorily. There was a serious strike in 1938 in the copper mines of the Indian Copper Corporation, Ltd. The strike lasted for about three months and ultimately ended at the intervention of the Conciliation Board appointed by the Government. The labour unions had come to be somewhat better organised by this time and were conscious of their rights and privileges. The Tata Iron and Steel Company, Ltd. and the Indian Iron Company, which had taken possession of all the mines of the Bengal Iron Company, had a satisfactory time. There was good working in china-clay, kyanite, gold, asbestos and soap stones as there was a good demand for them. In 1939 alone the total amount of refined clay despatched from the district was 10,864 tons against 6,489 tons in the previous year. Singhbhum is the only district in Bihar where high grade china-clay occurs. In contrast to all this the market for manganese-ore declined with the cessation of the Second Great War. The market for manganese ore had been in slump till it brightened up again in 1951 owing to stock piling by some foreign countries.

The countryside depended on agricultural economy which did not have a good time in spite of the fact that the agricultural labourers could always find a venue in the factories. The prices of essential commodities had very considerably risen which was not an unmixed blessing. While the direct agriculturists were benefited by the high prices of grains, the landless labourers and the classes of men that depended on salaries had to suffer. The State Government realised that the *raiyats* needed some relief. Rent Reduction Operations under section 33A, read with section 35 of the Chotanagpur Tenancy Act and Bakast Restoration Operations under sections 3 and 6 of the Bihar Restoration of Bakast Lands and Reduction of Arrears of Rent Act, 1938, were ordered to be taken up. These measures were calculated to give some relief to the *raiyats*. Practically no use was made of the sections 3 and 6 of the Bihar Restoration of Bakast Lands and Reduction of Arrears of Rent Act, 1938. The Rent Reduction Operations started from

the 1st April, 1940. The collections in 1941-42 showed an improvement on both the arrears of rent and the current collection in Kolhan and Porahat Government estates. The incidence of rent was comparatively lightened. There was a fairly good outturn of crops and the material condition of the agricultural population had improved. The effects of the Rent Reduction Operations were indicated by 86.70 per cent collection of the total demand in 1943-44. The year 1943-44 closed with a small balance of arrears.

FROM 1942 ONWARDS.

The cost of living was shooting up and in 1942, Jamshedpur became the dearest place in Bihar for the workmen. In this city the cost of living recorded in 1942 was 244 points as against 144 points in 1914.

With the rise in the prices of essential commodities the wages had also been going up. There was an increase in employment due to the construction of aerodrome and military works in Dhalbhum subdivision and the opening up of the cement factory by the A. C. C. Company at Jhinkpani in Sadar subdivision. Labour was also recruited for Auxiliary Pioneer Corps and the Assam Road Projects. The Air Raid Precautions Organisation at Jamshedpur gave temporary employment to a large number of men. The A. R. P. Organisation at Jamshedpur was wound up in January, 1945.

The cross currents were to the benefit of the manual labourers. The Tata Iron and Steel Company, Ltd , paid Rs. 10 per month to the labourers as war allowance and there was also a further provision for war risk allowance. The war measures and the high wages definitely improved the economic condition of the factory hands and the mine workers but had a very depressing effect on the lawyers and others in service who had a fixed income for their livelihood.

Government had to intervene to check the rise in prices of the essential commodities. Fair price foodgrain shops were opened. Grain movements were controlled. Standard cloth was manufactured and put to sale and Government took upon themselves the control and distribution of kerosene oil and sugar. Total or partial rationing had to be introduced in the townships. A new department, namely, Supply Department, was opened to cope with the situation. All these measures were meant to check the spiral rise in the price of foodgrains, cloth and other necessaries for life. But it may be said that the measures were not always an unqualified success. There is no doubt that there was a certain degree of profiteering in spite of strict watch on the part of the authorities.

The cost of living allowance granted by the Government to the low paid employees was not considered sufficient and this

had to be revised by a Pay Revision Committee. The concession of cost of living allowance was extended to the higher paid officers too and this has continued since then. Government had to sanction special grants for the dearness allowance to the teachers and other employees of the local bodies. To check inflation, the legal tender of one thousand rupee note was withdrawn in 1946. Anti-smuggling measures were tightened up through an Anti-smuggling Force. The net result of all these measures was rather uneven. The cultivators and the middle men made a good use of the rise in prices, the factory hands were not too badly off but the middle class people, and particularly the people who had to depend on a fixed income, were subjected to a lot of sufferings. As a matter of fact, this trend was not peculiar to Singhbhum district alone but was practically noticeable throughout the State and beyond. The sufferings of the middle class population which usually forms the backbone of the society became more acute from this period.

Jamshedpur was a special problem in the years following 1941 when price control measures were tightened up. Jamshedpur had an influx of population as more people from the rural areas were coming to the town in search of jobs. Total rationing was enforced in Jamshedpur in 1944 and partial rationing in some other industrial townships. So far as paddy produce was concerned, Dhalbhum subdivision was considered a surplus area. But Jamshedpur, being an industrial centre with a large population needed a large import of foodgrains. The total quantities of foodgrains imported to Jamshedpur both from outside and within the province from 1944 to 1952 were as follows:—

Year	Imported from outside the province.	Imported from within the province (excluding the district of Singhbhum).
	Mds.	Mds
1944	1,71,052	2,33,533
1945 . ..	5,89,810	93,777
1946	3,73,156	2,53,100
1947	4,91,489	1,03,782
1948 ..	5,52,919	22,648
1949	4,00,276	31,177
1950	5,40,214	2,05,177
1951 . ..	8,12,622	2,44,076
1952 . ..	51,042	95,118

In addition to the above, the following quantities of rice and paddy were procured in the Dhalbhum subdivision during the period 1946 to 1952 :—

Year.			Paddy.	Rice.
			Mds.	Mds.
1946	..	..	0,318	..
1947	..	..	1,15,085	1,02,184
1948	..	..	..	40,660
1949	..	..	..	37,187
1950	..	..	..	30,986
1951	..	..	.	18,389
1952	..	..	..	25,250

The bulk of tho procured rice was sold in Jamshedpur through the ration shops.

In spite of a certain amount of economic distress and a ceiling price of foodgrains generally obtaining between 1944 and 1951, the rural areas did not need any rationing. The people there could meet their requirements from open market. But in 1951 the position was changed. In this year there was a partial failure of crops in parts of Ghatsila and Potka thanas. Some fair price shops were opened in these areas which were subsequently extended to the other remaining thanas of Dhalbhum subdivision. The ruling prices of rice in the city in 1953 were from Rs. 25 to Rs. 30 per maund and in the rural areas from Rs. 21 to Rs. 25 per maund. Statutory control over the price of rice and paddy was abolished in 1952. From April, 1952, Paddy Levy Scheme was enforced. According to this, a certain quantity of paddy was procured from the producers who had got a good produce and Monopoly Procurement Scheme was abolished. Due to improved food position statutory rationing was abolished from June, 1952. The restrictions in the movement of foodgrains within the province were also lifted in the same month.

The control rates of rice and paddy per maund prevailing in Jamshedpur city and Dhalbhum rural areas during the years 1944—49 were as follows:—

Year.		Jamshedpur.			Rural area.		
		Rs.	as.	p.	Rs.	as.	p.
1944-45	(1) Paddy ..	6	0	0	6	0	0
	(2) Coarse rice ..	12	6	0	11	0	0
	(3) Medium rice	13	8	0	12	9	0
1946-47	(1) Paddy ..	6	0	0	6	0	0
	(2) Coarse rice ..	11	13	0	10	4	0
	(3) Medium rice ..	12	13	0	11	4	0
1948-49	(1) Paddy ..	9	8	0	8	8	0
	(2) Coarse rice ..	15	12	0	14	4	0
	(3) Medium rice ..	16	12	0	15	4	0

These figures will indicate that strict statutory measures like procurement and embargo on the movement of foodgrains from within the district kept the prices lower in parts of Singhbhum district than the prices in other parts of Bihar. This was a necessity because the industrial labour could complicate the position by refusing to work unless they had a satisfactory level of wages.

The availability of credit is also another indicator of the economic condition of the people. There were no banks in the district in 1910 when the last District Gazetteer was published. At the moment there are several banks in different parts of the district. The State Bank of India and the Central Bank of India have several branches. Chaibasa has also a Co-operative Bank. There are also some other non-scheduled banks in different parts of the district. Individual bankers in the towns of the district are slowly dying out. Saving habits are being acquired by the people. The drive for National Savings Certificates have had a fair response in this district. But the Kabuli money-lenders are still in demand as they readily lend without much security,

The Bihar Money-lenders' Act was passed in 1938. Since the passing of the Act more than 1,000 certificates had been issued to the money-lenders under the Act. In case the loan advanced by those money-lenders is without security, they can charge interest at 12 per cent per annum. But if it is with security, they can charge at 9 per cent per annum. As a matter of fact, the actual rate of interest charged by the money-lenders was much higher than the rate of interest allowed under the Act and it is supposed to be varying from 12 per cent to 25 per cent per annum according to circumstances. Another source of rural finance is the provision of *Tacavi* and agriculturists' loans. These loans are mainly taken for the purchase of bullocks, seeds, etc. They are not so very popular, unless abnormal conditions prevail.

It is, however, to be noted that the rural finance in the district is still more readily available with the money-lenders. Due to the fact that the Joint Stock Companies have very little activities in the rural areas, the money-lenders are still flourishing. A large number of Insurance Companies have been doing good business in the industrial centres. The agents of the Insurance Companies have even penetrated into the remote corners of the district where mines are being worked. Recently, the Central Government in the Labour Department have initiated a Provident Fund Scheme for the workers in the factories, and this scheme is working satisfactorily.

After 1947.

After 1947, the State has assumed the role of a Welfare State and a large number of welfare measures have been adopted, particularly, to improve the condition of the Adibasis. A large number of major, medium and minor irrigation schemes have also been introduced

to step up the grow-more-food campaign. The Bihar Panchayat Raj Act has been enforced to decentralise judicial functions along with other objectives. The rural litigants have been given an opportunity to save their time and money and to get quicker decision in minor cases at a lesser cost.

There has been a phenomenal progress in giving more medical relief, better communication and education. Steps have been taken to grow more crops on more scientific methods.

A definite swing towards growing more *rabi* crops and vegetables has been noticed since 1951. The urbanisation of areas and the growth of the industries have led to the growth of green vegetable belts in the neighbourhood of every township. Vegetables to Jamshedpur are carried by head load even from Chandil, which is about 16 miles by cross country. Food habits have also been changing and there is a larger consumption of rice and wheat in comparison to the grains like *gundli*, *china*, sweet potato, etc., which used to be largely consumed by the poorer sections.

It is unfortunate that the economic condition of the people has been much affected by several partial or complete failures of *Hathiya* rains since 1950. There was a partial failure of *Hathiya* rains in 1950-51 and some of the police-stations had to be declared as scarcity pockets. Relief measures had to be resorted to and fair price shops had once again been opened to supply foodgrains. In 1951-52 a sum of Rs. 3,00,000 was distributed as agriculturist loan and a sum of Rs. 1,95,000 was distributed as land improvement loans. A large number of major, medium and minor irrigation schemes were taken up in different areas with a view to give protection from scarcity. In 1952-53 there was again a threat of scarcity and a sum of Rs. 1,10,435 was distributed as agriculturist loan and a sum of Rs, 41,990 was distributed as land improvement loans. The harvests in 1953-54 were somewhat better as there was a fairly satisfactory rainfall throughout the district. But unfortunately the conditions of crops were not good in 1954-55. There was again a drought and the people had to suffer due to failure of crops. Certain test relief schemes were taken up besides the usual measures like distribution of loans, provision of schemes to give employment, etc.

The rainfall since 1955 has been very untimely and inadequate. In 1955-56, there was a failure of crops in certain parts of the district and a sum of Rs. 10,90,000 was spent over hard manual labour schemes. The District Board also spent a sum of Rs. 1,20,000 on the execution of relief schemes. This amount was a Local Self-Government Department grant. Gratuitous relief had to be resorted to and a sum of Rs. 1,90,055 was spent under this head. Rice was sold at a subsidised price in the scarcity areas. Cloth had to be distributed free to the poorer persons in the scarcity pockets.

In 1957, Singhbhum district was very badly affected by drought. Unfortunately, in 1957, there was a drought in other districts of the State as well but Singhbhum was one of the worst affected. The repeated scarcity due to droughts and the fact that the same pockets are affected since the last few decades rather suggest that the irrigation schemes have not had the desired success. It is possible that the schemes have been mostly attuned to the presumption that there will be rains and there is not much scope for tapping sources of perennial water in this district. The crops are still depending on the gamble of rains and steps have got to be taken to meet this situation.

The First and Second Five-Year Plans have got provisions for various ameliorative schemes for improving the economic conditions of the district. The four blocks, sponsored during the First Plan period, have taken into their fold an area of 666 square miles consisting of 824 villages with a population of about 2,11,000 persons. In these blocks an amount of Rs. 6.35 lakhs was spent by the Government up to March, 1956 and the people's contribution in cash, labour and kind was valued at Rs. 8.70 lakhs. These blocks have opened fresh avenues of employment in the district.

It is too early to come to a correct appraisal of the National Extension Service and Community Development Projects which have been introduced since 1951. The object is to evolve a new life in rural areas and for generating in the village citizens a consciousness of their rights and obligations of the Welfare State. The two fold objectives, decentralisation and democratisation, will have their effects on the social and economic life of the common man.

Among the other noticeable features of the quinquennial period from 1950 onwards mention could be made that *biri* manufacturing has had a set back in consequence of the closure of Pakistan market. The shellac factories have to be closed in 1953-54 on economic grounds. Shellac has had a slump all over India.

It has been mentioned in the Land Revenue Administration Report of 1953-54 that there was one Central Co-operative Bank at Chaibasa for the whole of the district and about 130 Multi-purpose Co-operative Societies and Credit Co-operative Societies were affiliated to it. There were 51 such unaffiliated societies in the district. Besides there were 45 Salary Earners' Co-operative Credit Societies in Jamshedpur and Golmuri areas. There was one Central Co-operative Union in Jamshedpur to which all the societies were affiliated. Further there were 18 Consumers' Co-operative Stores, two Teachers' Co-operative Stores, 15 Weavers' Co-operative Societies, one House Building Co-operative Society, two Fishermen's Co-operative Societies, one Motor Insurance Co-oprative Society, one Educational and Cultural Co-operative

Society, one Harijan Co-operative Society, one Co-operative Farming Society, one Community Chest Co-operative Society and one Jamshedpur Industrial Co-operative Society in the district. The total working capital of all the societies was Rs. 1,73,00,000. The Chaibasa Central Co-operative Bank had advanced a sum of of Rs. 3,75,000 as rural credit to its members.

There were also seven Credit Agricole Depots in the district for sale of fertilisers to grow more food, the field staff of which helped in propagation and popularisation of chemical fertilisers. There was another special type of Co-operative Society, namely, Eastern Railwaymen's Co-operative Life Insurance Society with headquarters at Chakradharpur and with area of operation in the States of Bihar, West Bengal, Orissa and Madhya Pradesh.

Of all the Co-operative Stores, the Jamshedpur Consumers' Co-operative Stores did the largest distribution of commodities for human consumption and through its 38 branches served 2 lakhs and 65 thousand people of the town.

The list of the societies appears impressive but it is not known how far they have been able to contribute towards the welfare of the common man.

WORKING OF MINERALS.

From the Land Revenue Administration Reports of 1951-52 to 1954-55 it appears that different minerals in the district were considerably exploited either for consumption in the factories within the district or outside the district or were exported to foreign countries to earn foreign exchange.

Iron-ore is the most extensively exploited mineral in the district. The main lessees of iron-ore are the Tata Iron and Steel Company, Ltd. and M/s. Indian Iron and Steel Co., Ltd. There are a few other lessees who exploit iron-ore for export. The lease-holders during the period 1951-52 to 1954-55 exploited 69,87,562 tons of iron-ore, out of which the Tatas alone exploited 38,45,017 tons to feed their Iron and Steel Factory, Jamshedpur and 52,233 tons for export outside the country. M/s. Indian Iron and Steel Co., Ltd. exploited 22,10,338 tons to feed their iron and steel factories at Kulti and Burnpur. Other lease-holders together exploited 8,79,974 tons entirely for export.

During the period 1951-52 to 1954-55, 1,59,889 tons of manganese-ore were exploited, out of which 74,489 tons were consumed in the steel factories within the country and the rest were exported outside the country. During the same period 15,310 tons of chromite were exploited and almost the entire quantity was consumed in the steel furnaces within the country. The quantity of china-clay exploited during the same period was 81,133 tons and was consumed within the country in textile mills,

paper mills, pottery works and chemical factories. The quantity of limestone exploited during the period was 12,98,963 tons, out of which a quantity of 12,93,455 tons was consumed by the Associated Cement Co., Ltd., Jhinkpani, who were also the main lessee of the mineral in the district and the rest was exported outside the district. During the same period 92,645 tons of kyanite, 7,422 tons of soapstone and 16,315 tons of silica were exploited. kyanite was entirely exported outside the country, soapstone was consumed in the factories within the country but outside the district and silica was entirely consumed by the Tatas for preparing refractory bricks for their furnaces.

The wide expansion of the Tisco and Telco works has been covered in the chapter on Jamshedpur.

The Adibasi Home Now.

With all the changes that have come in, the steel frame of the economic structure of Adibasi life remains almost the same. Their houses are as before, probably somewhat better in outlook with more wooden cots, one or two chairs and more poultry. The economic basis of life among the Hos is still agriculture with occasional hunting and fishing. The village *hats* and *melas* and festivals still remain the centre of gaiety, amusement, sale and purchase and meeting of friends. The liquor booths form another attraction and supplement the *handia* or rice beer which is made at home. The *paila* of rice (a small basketful of rice) still remains the unit of wages in the rural areas. The woman was important in the family and has become economically more important because of the males taking to mining and other industrial occupations. With all the impact of modernism the tribal heart has the same old type of beatings attuned to the hills, forests, agriculture and gaiety. Their mind may be with the steel plants or the mines but their heart is at the tiny village in the lap of the jungle and by which quietly flows the streamlet as before.

CHAPTER XVII.

LAND REVENUE ADMINISTRATION.

TERRITORIAL CHANGES.

The boundaries of the district of Singhbhum have undergone frequent changes in the past. Singhbhum was first taken over by the British in 1821 with the Kolhan as its jurisdiction. In 1857, Raja Arjun Singh of Porahat had risen against the British Administration. He was defeated and his State was confiscated in 1858. Portions of this Tributary State were given to the Chiefs of Seraikela and Kharsawan, and the rest was added to this district enlarging its area and its revenue administration made over to the Board of Revenue.

The present subdivision of Dhalbhum formed a part of Midnapur district about that time and in 1838 it was transferred to Manbhum. In 1846, it was added to Singhbhum, when its boundaries underwent changes for the third time. Three villages of Manbhum district, when it was a part of Bihar State, namely, Mango, Pardih and Dimna, lie on the outskirts of the steel town of Jamshedpur. It was considered more convenient to administer them from Jamshedpur. With this objective these three villages were transferred to Singhbhum in the year 1945, vide Government notification no. 877-P. R., dated the 1st August, 1945.

In 1947 India attained independence and the States of Seraikela and Kharsawan were merged with the State of Orissa on the 1st January, 1948. But on reconsideration they were transferred to Singhbhum, district on the 18th May, 1948 and were grouped together in a separate subdivision known as Seraikela-Kharsawan.

For the same reason of administrative convenience 39 villages of Khunti subdivision in the district of Ranchi were transferred to Singhbhum, vide Government notification no. 4/J1-1017/54-P. G.-1226, dated the 5th August, 1954. These villages were closer to Seraikela town, the subdivisional headquarters. With the transfer of these villages internal readjustment of jurisdictions between Seraikela and Sadar subdivisions became necessary, with the result that 69 villages of Seraikela-Kharsawan subdivision, which formed enclaves within the Sadar subdivision, were transferred to the latter.

As a result of the recommendations of the States Reorganisation Commission in 1956 a part of Sadar subdivision of the Manbhum district was transferred to West Bengal and the rest comprising of the police-stations of Patamda, Ichagarh and Chandil, was transferred to Singhbhum because of administrative convenience. Ichagarh and Chandil areas were added to the Seraikela-Kharsawan subdivision and Patamda area was added to Dhalbhum.

In 1950 the Bihar Land Reforms Act was passed and under section 3 of this Act Dhalbhum Raj and its 7 tenures were notified. Some more tenures lying in Seraikela-Kharsawan were notified on the 16th August, 1955 and finally on the 1st January, 1956 all the remaining estates and tenures were taken over under the area notification. According to the provisions of section 3A of the Bihar Land Reforms Act, parts of Purulia which came over to Singhbhum in November, 1956 had also been notified under this very section for being totally vested in Government, vide Government notification no. E-VII-109-57—3607-L. R., dated the 31st May, 1957. The general pattern of revenue administration in all these areas is the same—particularly after vesting under the Bihar Land Reforms Act but still, each area has its special distinctive characteristics because of its past history and origin. It is, therefore, taken up separately to deal with their revenue administration.

KOLHAN.

Early History.

The earliest authoritative document on land revenue administration in Singhbhum district is the Report of Lt. Tickell, the first British administrator, posted at Chaibasa after Singhbhum district was overrun by the British in 1836. This report was published in the *Journal of Asiatic Society of Bengal*, Vol. IX, 1840. The British conquest of the area known as Kolhan was done earlier in 1821, but the suzerainty was nominal. The Hos could not be controlled by the Singhbhum Chiefs and in 1836 a strong force was sent against them and after some bloodshed they were reduced to submission. It is after the conclusion of this campaign that the British Government resolved to bring the territory under its direct rule. Accordingly, 23 *pirs* (divisions), over which the Rajas of Porahat, Seraikela and Kharsawan claimed suzerainty, were, with 4 other *pirs* taken from Mayurbhanj, brought under the direct management in the name of the Kolhan.

First Settlement of 1837 by Major Wilkinson.

The first settlement was carried out in 1837, when Major Wilkinson, the Agent to the Governor-General, fixed the rental at 8 annas per plough of land. The total assessment was Rs. 5,108 for 622 villages and was realised without difficulty. At the same time, the old village system of the Hos was maintained by the recognition of the *mundas* or the village headmen and of the *mankis* or the headmen for groups of villages.

*Tickell's Memoir.**

The assessment per plough was, of course, not very thorough. In his Memoir, Lt. Tickell mentioned that the amount of *malguzari* for 1838-39 at the rate of 8 annas per plough was in round

*Published in the *Journal of Asiatic Society of Bengal*, 1840.

numbers Rs. 6,500. This system of assessment through the existing ploughs was also used for estimating the population. Tickell further mentioned that he thought the population will be near about 70,653, according to the ploughs in existence. This calculation, however, could not be very correct.

Report of Henry Ricketts, 1854.

Henry Ricketts, Member, Board of Revenue, toured in Singhbhum district and his detailed report was published in 1854. Rickett. also mentioned that the revenue demand fixed at 8 annas per plough and the number of ploughs to be ascertained from the *mankis* though not satisfactory was the only possible arrangement in the then existing circumstances. Ricketts further mentioned that the lands cultivated by non-resident cultivators were to be assessed at 8 annas for each 5 *khandis* of seeds. One *khandi* is a maund. The rent was collected by the *mundas* and paid by them either direct or through the *mankis*. The *mundas* and *mankis* were allowed to keep a commission of 1/6th or 1/8th as their wages.

At the beginning of each year the *mundas* and *mankis* gave the number of ploughs owned by the resident *raiyats* and the quantity of *khandis* or seeds sown by the non-resident *raiyats*. *Pattas* were given each year to each individual *raiyat*. The collection showed that the revenue had gradually increased from Rs 5,108-5-8 in 1837-38 to Rs. 8,523-6-2 in 1852-53. In 1855 without altering the principle of assessment, but by simply doubling the rate per plough, a net revenue of Rs. 17,448 was obtained, and a settlement for 12 years was concluded.

Changes in Assessment, 1867.

In 1867 a change was made in the mode of assessment in all the *pirs*, except Saranda, Rengra, Latua and Rela, in which the old system was continued owing to the backward state of the cultivators. A meeting was held in 1866 which was attended by the *mankis* and *mundas* and it was settled—

(1) that the land should be measured;

(2) that the system of assessment per *hal* or plough should be continued, but that the area of land covered by each *hal* should be fixed and that such area should contain an admixture of 1st, 2nd and 3rd class lands;

(3) that the rate per *hal* be enhanced from Re. 1 to Rs. 2;

(4) that the settlement should be for 30 years.

Previously a *hal* of land was variable and supposed to be an area sufficient for 5 maunds of seeds to be sown in it — a mode of assessment that was probably suited to the nomadic habits of

the people. The area of each *hal* was now fixed at 12,500 square yards, or at 7 *bighas*, 16 *kathas* and 4 *chataks* of the standard *bigha*. The rate of Rs. 2 per *hal* gave an incidence of a little over 4 annas per standard *bigha* or 12 annas per acre.

The gross assessment under this system amounted to Rs. 64,828-14-0 and the net assessment to be paid to the Government to Rs. 46,247, the difference being paid as remuneration to the *mankis*, *mundas* and the village accountants at the rate of 10, 16 and 2 per cent respectively. Dr. Hayes concluded this settlement on the basis of these principles but instead of a proper field survey rough sketch maps were prepared. No field survey was possible without the help of the foreign *amins* and it was considered impolitic to bring the foreign element or *dikkus*. The Hos responded well, although the rental went up almost thrice because they appreciated that all the lands they owned were registered. This was a definite landmark for the liquidation of their nomadic habits.

Craven's Settlement, 1897.

The background of the settlement of 1897, the first regular settlement, was the changed conditions owing to the reservation of forests, opening of the Bengal Nagpur Railway, the influx of a large number of foreigners and the spread of primary education. The settlement was preceded by a conference between the Deputy Commissioner and the leading *mankis* and *mundas*, and the proposal to make a cadastral survey and record-of-rights was unanim usly adopted by the people present. It was also decided that there should be a light assessment on the *gora* lands (uplands) which had hitherto escaped assessment.

The settlement conducted by Mr. Craven in 1897 was the first settlement in the Kolhan but it does not appear to have followed any particular rules. But it reiterated the mutual agreements between the parties and the incidences depending on the customary law of partition and succession. The record-of-rights prepared in Craven's settlement had an embodiment of the Tenancy law, rights, duties and liabilities of the headmen, the rules as to the reclamation to the lands, transfer and the like. The settlement had to recognise the *dikkus* or the foreigners who had by that time not only penetrated into the district but had acquired lands. A distinction was made between the rent paid by the *dikkus* and that paid by the Hos.

New Rate of Assessment, 1897.

After further enquiry it was decided that (1) a rate of one anna per *bigha* should be imposed on *gora* lands; (2) the existing rate of rent for *bera* and *bad* lands, viz., 6½ annas per local *bigha* of 2,500 square yards, or 12 annas an acre, should be maintained;

(3) in the *pattas* the right should be distinctly reserved to Government to alter the rates of rent at future settlement; (4) where *dikkus* (foreigners) had been allowed to come to the country by the connivance of the *mundas*, and without the permission of the Deputy Commissioner, the rate of rent in each case should be left to the discretion of the Settlement Officer to fix; (5) a provision should be inserted in the record-of-rights and in the *patta* declaring that the holding was not transferable by gift, sale or mortgage, without the permission of the Deputy Commissioner; (6) when such transfers did occur, the headmen should be required, under the penalty of fine and possibly, after repeated neglect, of dismissal, to report them to the Deputy Commissioner; (7) *pattas* should be given to the *mundas* and *mankis*, each *raiyat* being furnished with an extract from the settlement rent-roll showing the particulars of his land, that is, the area, rate, and amount of rent, as they stood at the time of the survey and settlement; (8) the police powers hitherto enjoyed by the *mundas* and *mankis* should not be taken away.

The settlement of Mr. Craven showed that the ordinary Ho of Singhbhum needed protection against the foreigners, a large number of whom had already come to Singhbhum and were looking forward to an opportunity to advance money as loan at high interest and to grab lands. At the time of the settlement in 1867 there were only 1,579 foreign cultivators in the Kolhan; but by 1897 their number had increased tenfold, that is, to 15,755. Enquiry also showed that the consideration paid for the land sold by the Hos to *dikkus* was usually very inadequate. Even for a goat or a sheep or some paddy a Ho would part with a portion of his land. That is why Mr. Thomson framed his rule in 1903 that no alienation of land by the aboriginals would be legal without the permission of the Deputy Commissioner. Further, the village headmen were required to report to the Deputy Commissioner all such transfers and no foreigner, who was not a resident *raiyat*, could, without the Deputy Commissioner's permission, cultivate any land in a Ho village. These rules were, however, not statutory at that time.

Tuckey's Settlement, 1918.

The latest settlement in the Kolhan was taken up in 1913 and concluded in 1918 by Mr. A. D. Tuckey, I. C. S. This settlement was made under the provisions of the Chotanagpur Tenancy Act promulgated in 1908 against the opinion of the local officers. The application of the Chotanagpur Tenancy Act for the Kolhan was a very controversial matter. One group of opinion thought that it would destroy the community system of the Hos and that the introduction of the Law Courts would be prejudicial to their interests. It was even suggested that special chapters should be added to the Chotanagpur Tenancy Act for the Kolhan. Government, however, did not agree to taboo the Chotanagpur Tenancy

Act for the Kolhan area or to add special provisions. But the forebodings did not follow the Settlement Proceedings conducted under the Chotanagpur Tenancy Act. Partially this was due to the fact that although the Chotanagpur Tenancy Act was in force since 1908 it was not scrupulously followed and the people were still guided by the principles in Mr. Craven's record-of-rights.

Rent Assessment.

The settlement of 1918, popularly known as Tuckey's Settlement, was more systematised and gave more reliable statistics. Thus for the purposes of fair rent settlement, Craven's division of cultivable lands into *bera*, *bad* and *gora* was maintained. *Bera* is the lowest land, almost always irrigated from the *bandhs*, springs or streams *Bad* is the high terraced land depending entirely on the rainfall of its own surface. *Gora* is the usual upland of .poor fertility. *Bera* was put as first, *bad* as second and *gora* and *bari* as third class There was a slight increase in the rate of rent assessed in view of the fact that there had been a 50 per cent increase in the general price index since Craven's settlement.

Uniform rates of rent were adopted for each class of land though there was a distinction made between the rents paid by the Hos and by *dikkus*. The *dikkus* were assessed at double rates of the former The rates for the Hos and privileged old *dikkus* were, *bera* 9 annas per *bigha*, *bad* 7 annas per *bigha*, *gora* 1 anna 6 pies per *bigha* and for the unprivileged *dikkus*, *bera* Re. 1-2-0 per *bigha*, *bad* 14 annas per *bigha* and *gora* and *bari* 3 annas per *bigha* The total gross rental of the Kolhan areas after Tuckey's Settlement amounted to Rs 2,52,351-8-0, which, after deducting the commission of the *mankis*, *mundas* and *tahsildars*, came to the net sum of Rs. 1,77,597. This excludes the rent for the ten *lakheraj* villages in the Kolhan which was paid to *lakherajdars* and not to the Government.

The following statement gives the comparative figures for the different settlement for the Kolhan :—

Settlements	Number of villages	Number of ploughs or holdings.	Gross rental.			Percentage of increase in the rental.
1	2	3	4			5
			Rs.	a.	p.	
1837	622	10,216	5,108	1	8	..
1854	622	17,047	8,523	0	2	66.8
1855	786	23,206	23,266	0	0	172.9
1867	847	32,988	64,828	14	0	178.6
1897	911	7,97,311	77,300	1	3	173.5
1918	901	6,73,272	52,351	8	0	..

Rent Reduction Operations.

The next important landmark for Land Revenue Administration for the Kolhan took place when the State sponsored a general rent reduction drive in 1940. As a result of the rent reduction operations, the net revenue accruing from the Kolhan was reduced to Rs. 1,42,177.

Cess.

The Cess Act was extended to the Kolhan in 1917 and at the request of the Deputy Commissioner, cess calculated on the new rents at half an anna in a rupee was recorded in the record-of-rights of the *raiyat*. But no cess was assessed on tanks, *bandhs* or other non-rent paid lands. The *mankis* and the *mundas* were not treated as the tenure-holders for cess; it was calculated only on their *raiyati* lands. They got no commission for collecting the cess. The total cess for each village was calculated separately from the rent and entered in the *jamabandis* and in the headman's record-of-rights.

In 1944 the rate of cess was enhanced to 9 pies in a rupee and subsequently in 1946 to 1 anna in a rupee. This is the existing rate of cess at present and the total amount of cess assessed on land revenue is Rs. 59,623.

There are mines and forests in the Kolhan as well as in the other parts of this district and under the Cess Act, cess is leviable on them as well. Every year cases are instituted and net profits assessed for the imposition of cess at 1 anna in a rupee under section 6 of the Cess Act. The table below gives the number of cases instituted under each head for the district and the cess assessed for the years 1949-50 to 1951-52. The important assessees for this kind of cess are Tata Iron and Steel Co., Ltd., Indian Iron and Steel Co., Ltd., Indian Copper Corporation, Ltd., Associated Cement Company, Ltd , and Bird and Co., Ltd. who were assessed to Rs. 85,803, Rs. 25,514, Rs. 29,379, Rs. 22,526 and Rs. 2,446, respectively for the year 1951-52.

It may be mentioned here that the Cess Act has not yet been extended to the old Seraikela and Kharsawan States.

Year.	Mines.		Forest.	
	Cases instituted.	Cess assessed.	Cases instituted.	Cess assessed.
		Rs. a. p.		Rs. a. p.
1949-50	64	1,82,059 14 0	239	1,200 2 0
1950-51	75	2,12,709 7 0	250	1,150 9 0
1951-52	115	1,86,034 14 0	390	1,056 12 0

The following table gives a picture of the cess demand of the district :—

Year.	Demand.			Collection.	Reduction or remission.	Balance	Percentage.
	Arrear.	Current.	Total.				
1	2	3	4	5	6	7	8
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
1949-50	60,450	1,83,260	2,43,710	2,02,996	..	40,650	83.34
1950-51	61,345	2,13,348	2,74,693	2,52,511	..	22,182	91.93
1951-52	32,566	2,57,691	2,90,257	1,48,185	..	1,42,072	51.05

The above figures include not only cess on lands in the district, but they also include cess levied on mines and forests in these years.

It may, however, be mentioned here that the position which existed in those years has completely changed with the enforcement of the Bihar Land Reforms Act. Unlike private landlords or tenure holders the Government are to pay 2 annas in a rupee only on their collectable *jamas* and not on their waste or untenanted lands. As the collective *jama* for the district after the taking over of all the estates and the tenures has not been finally fixed after due verification, the total cess payable by the Government has not yet been decided. Government have, however, made *ad hoc* payments towards cess from year to year pending final assessment.

System of Administration.

For the purpose of administration the Kolhan is divided into 75 local divisions each comprising of a group of 5 to 20 villages. Each division is under a *manki* or a divisional headman and there are the *mundas* or village headmen, who are assisted in their work by the *tahsildars* or the village accountants, and the *dakuas* or the village underlings. At the official level the Kolhan is administered by an officer of the State Civil Service known as the Kolhan Superintendent assisted by other junior officers. The Kolhan Superintendent is under the control of the Deputy Commissioner.

In 1947, the Government appointed a Kolhan Enquiry Committee under the Chairmanship of the Commissioner of the Chotanagpur Division to enquire into the general administration of the

Kolhan. The Committee consisted of several non-official members and two *mankis*. Among the changes suggested by the Committee, the following were approved by the Government :—

(1) The posts of *mankis* and *mundas* should be made elective and that their educational qualifications should be insisted upon as far as possible;

(2) the *mankis' elakas* (jurisdiction) should be re-arranged and re-adjusted to make them more or less of uniform size;

(3) the *mankis* and the *mundas* should be asked to furnish the land security for their appointments; and

(4) a fresh survey and settlement operation should be undertaken soon so that the rent may be assessed for all the lands reclaimed after the last settlement from which the Government do not derive any revenue.

Mankis.

The *manki* collects from the *mundas* the village rents as fixed by the settlement, and pays them into the district treasury according to the *kists* or now to the local Karamchari according to their convenience Should he fail to pay the full amount or part of any *kist*, the Deputy Commissioner may recover the amount due by the sale of his property, whether movable or immovable, and may dismiss him from his office. He is remunerated by a commission of 10 per cent, on the gross amount collected, and appoints the *tahsildars* or village accountants. It is his duty to prevent foreigners that are not already recorded as resident *raiyats* from cultivating or holding lands in any village within his *pir* without the written permission of the Deputy Commissioner. He is entitled, in consultation with his *mundas*, to settle the village waste-lands with resident *raiyats* and to assess such lands at rates not exceeding those established by the settlement. He is entitled to one-half of the rent so realised, and the *munda* to the other half, during the term of his lease. He was the police officer for his *pir* till regular police thanas under the Superintendent of Police were established in the Kolhan and in that capacity he was then competent to appoint *dakuas* or village constables. He, however, continues to be responsible for the protected forests contained in his *pir*, being bound to take steps to prevent and extinguish fires in such forests, and to report to the Deputy Commissioner any infringement of the protected forests rules. Finally, the *mankis*, his *mundas* and *raiyats* are bound to keep in repair all tanks, embankments, works of irrigation, and the roads within the limits of his *pir*, to preserve groves and trees planted by roadsides, and to encourage matters of improvement.

The *manki* is liable to fine and dismissal by the Deputy Commissioner for disobedience of orders or for breach of the terms

of his *patta*. In case he dies, resigns, or is removed from the post of *manki*, the Deputy Commissioner is at liberty to appoint as successor the *manki's* heir, if qualified, or any other male of his family found fit for the office or he may select some other person. If, however, the *manki* has been dismissed for misconduct, his heir has no claim to succeed him in his office. Where it appears to conduce to the public interest, the Deputy Commissioner may appoint a *juridar* or assistant *manki* and may divide the *manki's* circle retaining the existing *manki* in charge of one portion and the *juridar* in charge of the other portion. The office may not be transferred by gift, sale or mortgage; and if the *manki* does so transfer it, he is liable to dismissal.

Mundas.

The *munda* is the village headman, and his village is settled with him under the terms of a *patta*. The rent is not liable to enhancement during the period of the lease, but Government reserves the right to increase the rates for *bera*. *bad* and *gora* lands at any future settlement. The *munda* is responsible for the payment of the village rent through the *manki* of the *pir* according to the *kists* and is entitled to receive as commission 16 per cent of the gross village rent. Should he fail to pay the whole or part of any *kist*, the Deputy Commissioner may recover the amount due by sale of his property whether movable or immovable, and may dismiss him from the office of *munda*. Neither he nor the *manki* is entitled to claim any abatement of rent in consequence of the failure of crops, the absconding of *raiyats* or the non payment of their rents to him. He is bound to collect the rents according to the village *jamabandi* given to him, and is forbidden to demand from the *raiyats* higher rents than are therein fixed for the lands recorded in their names; but he is at liberty, with the approval of the *manki*, to settle with resident *raiyats* any waste-land within the village boundaries, and to assess such lands at rates not exceeding those established by the settlement, but no land within any protected forest may be cleared or broken up for cultivation without the written permission of the Deputy Commissioner. As already stated, of the rent so realised, the *munda* is entitled to one-half during the term of the settlement.

The *munda* keeps such accounts as may be prescribed, and must grant to every *raiyat* a receipt for his rent signed by himself or by the *tahsildar*. He is required also to keep up a register of all mutations and partitions of holdings in his village, and, on pain of fine or dismissal, to report to the Deputy Commissioner all successions to holding by inheritance, all family partitions of holdings, and all re-settlements and fresh settlements. He is forbidden in any case to evict a *raiyat* from his holding or from any portion of it without an order of the Deputy Commissioner or of a competent court. In case of a *raiyat* defaulting in the payment

of rent, the *munda* may within a year distrain the growing crop or the paddy on the threshing floor of the defaulting *raiyat*. This power was given to the *mundas* at the last settlement on the ground that as they themselves are summarily dealt with if they default, it was only fair that they should be given power of distraint. The *munda* is further bound to respect the rights of the *raiyats* as recorded in the village record-of-rights. He must not allow any *raiyat* to transfer his holding or any part of it by gift, sale or mortgage without the written permission of the Deputy Commissioner; and, under penalty of fine or dismissal, is bound to report all such transfers, when they do occur to that officer. He is forbidden to allow any foreigner, not already recorded as resident *raiyat*, to cultivate land in the village without the written permission of the Deputy Commissioner. He is also forbidden to take any *abwabs* or illegal cesses of any kind from the *raiyats* or to grant any lease for building purposes, quarrying or mining.

The *munda* was further the police officer of his village as the *manki* was of his *pir*. He is bound to obey all legal orders he receives from the *manki* as well as from the superior authorities. All the *raiyats*, as well as the village watchman, are bound to assist him in the discharge of his duties as police officer. He is bound to report to the Deputy Commissioner any infringement of the rules for protected forests which may be committed within the protected forests adjacent to the village and to take steps to prevent and to extinguish fires in such forests. He is also bound, with the assistance of the *raiyats*, to keep in repair all tanks, embankments, canals and boundary marks, as well as such portions of roads as are within the limits of the village, and to preserve the groves of trees and trees planted by roadsides in the village; also to encourage all works of improvements and measures calculated to add to the prosperity of the *raiyats*.

He is liable to fine and dismissal for disobedience of lawful orders, or for breach of the terms of his *patta*, and to dismissal, if he does not reside in the village of which he is *munda*. In cases he dies during the term of his lease, his heir, if qualified, is entitled to succeed to the *mundaship*. In the event of there not being a qualified heir, or of the *munda* being dismissed for misconduct, the *manki* and the resident *raiyats* are to elect a successor, subject to the approval of the Deputy Commissioner. In a few cases, where the *mundas* are minors, *juridars* or assistant *mundas* have been appointed to perform the duties of the office during their minority. As in the case of the *manki*, the office may not be transferred by gift, sale or mortgage, and if a *munda* does so transfer it, he is liable to dismissal.

Tahsildar.

The *tahsildar* is the village accountant and is appointed by the *manki*. He receives as commission two per cent of the village

rent, and may be dismissed by the Deputy Commissioner for his misconduct. His duties are to help the *munda* in collecting the rent, to grant receipts to the *raiyats* in the prescribed form, and to keep such accounts as may be prescribed. In theory there should be a *tahsildar* for each village, but in practice the *manki* appoints one or at most two *tahsildars* for the whole of his *elaka*, and the *tahsildar* is usually a member of the *manki's* family.

Tenures.

In the rent-paying villages of the Kolhan there is but one kind of tenure, viz., the simple cultivating tenure, there being no intermediate tenure between the proprietor and the actual cultivator of the soil, except 12 *lakheraj* tenures. These tenures were granted to different *lakherajdars* for help received in times of troubles or as compensation to those who held tenures under the States from which the *pirs* were taken in 1836 when they were incorporated in the Kolhan Government Estate. The rent of the village used to be taken by the *lakherajdars* before their vesting under the Bihar Land Reforms Act and the *manki* received no commission on the rent. But in no other way they differ from other Kolhan villages. Now, of course, the rent comes to Government.

The exact status of the *mundas* or the *mankis* as collecting agents or tenure-holders is still under examination and the problem now is to fit them in the present set up after the abolition of the zamindari

Khuntkatti.

A large number of the tenants were recorded in the later settlement as *khuntkattidars*. *Khuntkatti* tenancy has been defined in section 7 of the Chotanagpur Tenancy Act and dealt with in Chapter III of the Tuckey's Settlement Report. These are, properly speaking, the same as ordinary occupancy tenancy with the important exception that the rent assessed is not liable to enhancement. The total number of *khuntkatti* holdings according to the Tuckey's Settlement was 11,304 with total gross income of Rs. 41,363.

Rights of Tenants.

The tenancy laws give a lot of protection to the resident *raiyat*. Every resident *raiyat* has the right to extend his cultivation by reclaiming a portion of the waste-lands within the village boundaries provided that he has obtained permission from the *manki* and *munda*. Waste-land in any protected forest block may not be cleared without the special permission of the Deputy Commissioner. Such a *raiyat* has a preferential right as regards the settlement of abandoned holdings, and the *munda* is not at liberty to settle such lands with a non-resident *raiyat*, if a resident *raiyat* is found willing to take them over at the rent fixed by the settlement. A resident *raiyat* may also with the written permission

of the Deputy Commissioner construct a *bandh* or tank, or make any other improvement, on his own holding. He may not be evicted from his holding or any part of it without an order of the Deputy Commissioner or a competent court, and his rent cannot be enhanced during the currency of the settlement. If a *raiyat*, with the consent of the *manki* and *munda*, brings new land under cultivation, he is entitled to hold such land rent-free for an equitable period, after which the new land is to be assessed at rates not exceeding those established by the settlement; during the remainder of the period of the lease, one-half of the rent so realised shall belong to the *manki*, the other half to the *munda*. The *raiyats* have the right to graze their cattle free of charge on waste-lands throughout the year, and on cultivated lands (rice as well as *gora*) when there are no crops on the ground.

He has the right to plant trees on his holdings and to enjoy the fruits as well as the timber in view of the amended provisions of section 21-A of the Chotanagpur Tenancy Act. Previously he had no such right.

Village Forests.

In the Kolhan there are a large number of forests which are neither protected nor reserved. They are meant for the village community. Such village forests are managed directly by the Kolhan Superintendent under the supervision of the Deputy Commissioner. In these forests, the tenants have the usual customary rights to take wood for certain specific purposes, such as, fuel, house-building, agricultural needs, etc., free of any charge. They, however, cannot take any wood or timber for sale , nor can any big tree be cut down. The personal rights of the *manki* and *munda* so far as the village forests are concerned are the same as those of the other *raiyats*.

There has been an indiscriminate felling of the village forests with the connivance of the *mankis* and *mundas*. A system of permits has been introduced recently and now villagers can cut trees from village forests only after receiving a permit from the Kolhan Superintendent. This step was very necessary to prevent the forest economy so very important for this district being completely upset.

The Kolhan Superintendent.

Apart from purely revenue work, the Kolhan Superintendent has to maintain a number of bungalows for the facility of holding camp courts and also a number of roads connecting the Kolhan villages. *Hats* in the Adibasi area have to be maintained. Ameliorative measures, such as, construction of tanks or *bandhs*, have regularly to be taken. There are 12 Kolhan boungalows located at Jagannathpur, Jaintgarh, Majhgaon, Bharbharia, Kokcho,

Noamundi, Benusagar, Chakradharpur, Manoharpur, Sonua, Hatgamaria and Manki; a rest shed at Chaibasa, 2 parks, 45 roads with a mileage of 282, 335 tanks and 70 *hats*. The Government used to provide till recently funds under two separate heads for their maintenance, namely, Kolhan Improvement Fund and Kolhan Market Fund. The statement below shows the funds provided in 1949-50 to 1951-52 under these two heads. It may be mentioned here that these grants were also meant for Porahat. Rs. 15,000 w re set up for education out of this fund.

Nature of grant.	Year.	Amount allotted.
		Rs.
Kolhan Market Fund	1949-50	22,150
	1950-51	22,150
	1951-52	22,150
Kolhan Improvement Grant	1949-50	87,585
	1950-51	87,585
	1951-52	87,585

The improvement grants were to be utilised under six broad heads, namely, communication, buildings, wells, education, irrigation and miscellaneous. As for the Kolhan Market Fund, it was primarily meant for the maintenance of the *hat* sheds or their constructions for the reason that sheds had to be provided for thousands of persons coming to the *hats* on *hat* days.

However, with the amalgamation of the Khasmahal with the general pattern of revenue administration under the Bihar Land Reforms Act, the Market Fund was abolished with effect from 1955-56 and so also the Kolhan Improvement Grant. Now all the requirements of the Kolhan and Porahat are to be met from the Improvement and Contingency grants made for the entire district without any distinction.

PORAHAT.

Porahat was formerly a Tributary State, but was confiscated by Government in 1858 on account of the rebellion of Raja Arjun Singh. Some portions of it were granted rent-free in perpetuity to the chiefs of Seraikela and Kharsawan and to other residents of Singhbhum as rewards for their loyalty to the British during the 1857 movement and the remainder of the State was retained by Government. Its revenue administration was made over to the Board of Revenue.

In 1860-61 Captain Birch, the Senior Assistant Commissioner of Singhbhum, made a settlement for a period of 20 years followed by a further settlement in 1880-81 by Mr. Ganesh Chandra Tripathi. In 1890 Arjun Singh died and in 1895 Government granted the unalienated portion of the State to his son Narpat Singh under certain conditions as a revenue-free impartible zamindari. In the year 1897-98 the holders of certain subordinate tenures of the Porahat estate, viz., Kera, Bandgaon and Chainpur, which were being managed by Government under the Encumbered Estates Act, applied for their lands to be resettled by Government. The proprietor of the Porahat State, of which the current settlement was to expire in December, 1899, also joined the applicants. The application having been sanctioned, traverse survey was commenced in 1900 and the settlement was completed in 1903. Mr. J. H. Taylor made the settlement for a term of 15 years.

The new settlement was conducted under the provisions of Bengal Act V of 1875 and Bengal Act I of 1879, and in the course of the operations a record-of-rights and duties was drawn up, for the preparation of which there was no sanction in those Acts. It was objected to by the Raja of Porahat and other proprietors concerned as regards its description of headmen's rights, its prohibition of certain illegal exactions, and its definition of forest rights. Government then ordered that an authoritative record-of-rights should be prepared under section 101(I) of the Bengal Tenancy Act (VIII of 1885), which had been extended to Porahat and other parts of the Chotanagpur Division in 1903. This work was begun in 1905 by Mr. A. N. Moberly, I.C.S., and completed by Mr. T. S. Macpherson, I.C.S., in 1906.

The latest settlement in the Porahat area was conducted during the years 1928—32 under Mr. F. E. A. Taylor, I.C.S., as Settlement Officer. This was done under the provisions of the Chotanagpur Tenancy Act and Bengal Act V of 1875.

There are four sub-estates, viz., Anandpur, Kera, Bandgaon and Chainpur. Anandpur and Kera were originally granted to the junior members of the Raja's family for their maintenance and the holders paid quit-rents. The latter was remitted after the insurrection of 1857; and the zamindar of Porahat had no right to receive rents from or to interfere with the tenures, but he had a reversionary right to succession in the event of there being no male heirs. Bandgaon is an under-tenure of the Porahat State, to which it is liable to pay one-third of the net rental of its villages and of any income from its forests. The minerals also belong to the superior landlords as against the tenure-holders. Chainpur is another under-tenure, which was originally a service tenure held subject to the payment of a rent of Rs. 90-8-0. After the insurrection of 1857, Government directed that this quit-rent should be paid in perpetuity to the zamindar of Porahat.

The rates of rent were revised from those adopted in the Settlement of 1906 and were considerably enhanced.

The resulting gross rental for the total area was as below :—

					Percentage of increase over last settlement of 1906.
		Rs.	as.	p.	
(1)	Porahat	46,409	13	0	19.59
(2)	Bandgaon	1,912	2	0	63.0
(3)	Kera	28,634	1	0	19.34
(4)	Chainpur	5,987	5	0	15.73
(5)	Anandpur	17,575	1	3	69.49
	Total	1,00,518	6	3	26.42

The percentage in serial nos. 2 and 5 is higher because there were larger areas of lands in these estates reclaimed after the last settlement.

Abwabs and Rakumats.

Besides the rent assessed upon lands, certain kinds of trade taxes realised by the landlords in Kera and Anandpur were also recorded in the *Pradhani hukumnama* in the Settlement Records as having been legalised by long usage. The chief of these were :—

(1) *Tantkar* (payable by weavers) at the rate of 8 annas per head per annum.

(2) *Kamarkar* (paybale by blacksmiths) at the rate of about Re. 1 per head per annum.

(3) *Kumharkar* (payable by potters) which consisted in supplying a specified number of earthen pots a year.

(4) *Ghanikar* (payable by Telis on oil mills) at the rate of Re. 1 per head per annum in Anandpur estate and 8 annas in Kera estate.

(5) *Mahalikar* (payable by bamboo basket and umbrella makers) at the rate of 2 annas per head per annum.

(6) *Dasahara Salami* at the rate of Re. 1 per headman a year and a few others.

These taxes, however, have become extinct since the passing over of the estate to Government.

Land-tenures, Zamindari of Porahat

The zamindar of Porahat is the proprietor of the *pargana*, his immediate estate consisting of 368 villages, including two *bazars*, in the Sadant and Kolhan *pirs*, which are known as Khas Porahat. A number of villages, which, Government in 1858, after the confiscation of Porahat, recognised as rent-free *khorposh*, *brahmottar*, or *debottar* grants of the Raja, and two villages, Hatia and Nakti, which were special grants made by Government after the 1857 movement, are included within Khas Porahat and lapse (except Nakti) to the zamindar in default of male heirs of the grantees. Besides rent on cultivated lands in his villages, the zamindar is entitled to receive the proceeds of the management of the reserved forests. He seems to be entitled by local custom to all the more valuable minerals, except where artisans have a customary right to take them for the purposes of their profession. He has no right to interfere in the internal management of a village, while in the Kolhan *pirs* he is not in any sense, and in the Sadant *pirs* only as superior landlord, the owner of the land of the village cultivated or waste, or of the trees, etc., in the village.

Tenure-holders.

The subordinate or allied estates are technically tenures of the parent estate, and the holders are tenure-holders. The *Thakurs* of Kera and Anandpur have the same rights as the zamindar of Porahat in regard to rent and minerals in their tenures. As regards jungle, the present position is that the tenants are entitled to take jungle produce free, without permission, from any part of the tenure for their personal requirements, but not for sale. As the zamindar of Khas Porahat has a reversionary interest in their tenures, the tenure-holders have been recorded as *malguzars*, though their tenures are rent-free. Chainpur is subject to a quit-rent, and Bandgaon to a rent equal to one-third of its net rental and forest revenue (if any), all payable to the zamindar of Porahat.

Khorposh.

Altogether 12,644 acres have been granted as *khorposh* in the Porahat State and its dependencies. Such grants were given by the Rajas of Porahat to relatives for their maintenance, and consist either of entire villages or of lands in different villages. They have attached to them certain services, which formerly were principally of a feudal nature, the *khorposhdars* having to accompany the Raja in war and supply a contingent of *paiks* or soldiers. Of recent years this feudal service had fallen into disuse, but during the Keonjhar rebellion of 1891 several *khorposhdars* accompanied their Chiefs in support of the Government. With the passing of the estate to the Government such duties have naturally become obsolete.

Chakran.

Chakran or service grants account for 4,000 acres and are found in the dependent tenures of Kera, Anandpur and Chainpur. They consist either of entire villages or blocks of cultivation which were granted to relatives of the minor Chiefs (termed *Babus*), in addition to the usual *khorposh* grants or they are grants of land to *gohandals*, *paiks*, priests and menial servants in lieu of payment for services rendered. The services required from the *Babus* differed but were of a personal nature similar in many cases to the duties performed by ordinary *khorposhdars*, viz., attendance on the Chiefs on tours, wedding arrangements, etc., and in some cases the guardianship of the *garh* or residence of the Chief during his absence. These grants were hereditary. The grants to *gohandals* and *paiks* were similar to those granted to the native militia in Orissa and elsewhere. The *gohandals* were the special bodyguard of the Chief, but in course of time, their duties had decreased in importance, until they have become mere *piadas* or *chaprasis*. The *paiks* were the fighting force. Of course they are now things of the past and under Bihar Land Reforms Act these services would be evaluated for payment of compensation.

Rent-free Lands.

Rent-free lands, exclusive of *chakran* or service grants, cover an area of 4,178 acres, of which, 3,177 acres are situated in Khas Porahat. The grants consist of *debottar*, *brahmottar*, *mahatran* and other grants termed *baksis*.

Tenants' Rights.

Other tenures in the estate are those of *mankis*, *mundas*, *khuntkattidars* and *raiyats*. Before dealing with these, it may be mentioned that Khas Porahat contains two main divisions in which agrarian rights differ widely, viz., (1) the Sadant *pirs* of Chakradharpur and Porahat, and (2) the eight Kolhan *pirs*. The difference between them is explained as follows by Mr. T. S. Macpherson :

"The Sadant *pirs* consist of village communities owning the land within their boundaries, subject to a rent on cultivated lands payable to the zamindar, though in some of the communities a single member, the headman, has now appropriated many rights of the corporate owners. In the Kolhan *pirs* the villages are communities of the corporate owners, in which the *munda* is only *primus inter pares*, and the soil of which was never the property of the zamindar, who is a later superimposition, though the tribute payable by the community to the State has come to be assessed on cultivated land on the analogy of the rent of the Sadant *pirs*. In the Kolhan *pirs* the tenures and customs of the aboriginals, who are in an over-whelming majority, have been little affected by outside influences; and for this reason, as well as

owing to their history and the nationality of the inhabitants, the entries in the record-of-rights differ considerably from those of the Sadant *pirs*, where rent has always been payable to the superior landlord and in which the non-aboriginal or *dikku* element has always preponderated in influence, though at present, excluding Chakradharpur town and a railway premises, aboriginals and *dikkus* (including semi-aboriginals like Bhuiyas) are very equally balanced in point of numbers".

Mankis.

The *mankis* of Porahat were originally military chiefs or the first settlers of a tract of country, under whom groups of villages we e reclaimed, the headman of which recognised their authority. They survive only in the eight Kolhan *pirs* of Porahat and in he sub zamindari of Bandgaon, having recently been done away with the sub-zamindari of Kera. The modern *manki* is a divisional headman responsible to the zamindar for the village rental* whose other duties are to supervise the village headmen, to look after roads, boundaries and forests but he has no longer police duties, viz., investigating unnatural deaths, reporting offences, enquiring into and deciding petty cases and disputes. Succession to the office is by primogeniture, subject to physical and mental fitness, on which grounds the zamindar and the Deputy Commissioner have a right to reject the heir. The *manki* is liable to dismissal from his office for failure to perform his duties or for misconduct, and if he is dismissed a member of the family to which he belongs is entitled to succeed him. The *mundas* of the villages nominate, and the nomination is subject to confirmation as on succession.

The office of the *manki* has, however, declined sharply in importance and prestige. Although the *manki* has still theoretically vague supervising powers with regard to the headmen in his *pir*, they are seldom exercised, except for the *manki's* right of approving the election of village headmen within his *pir*. The rent also is paid practically by the headmen and the *manki* is only in the position of the forwarding officer.

The *manki's* office is not transferable by sale, gift or mortgage.

Headmen.

The headmen of Porahat are called *mundas* if they are Mundas or Hos; *pradhans*, if they are Goalas or Kumhars; *mahtos*, if they are Kurmis; *gonjhu*, if they are Nagpurias; *manjhis*, if they are Santhals; and *naiks*, if they are Bhuiyas. The headman collects the rent and pays it to the proprietor, works as the link between the Government official on tour and protects the village forests. Previously the headman enjoyed rent-free lands known as *man* as

* This position has also changed since the abolition of the zamindari.

his remuneration but now he has a cash commission on the village rental which is usually 2 annas and 6 pies per rupee of the whole amount.

The majority of the village headmen in Porahat are descendants of the reclaimers of the villages, that is, *khuntkattidars*. Succession is by primogeniture, but non-resident usually disqualifies.

The headman is a very important link in the economic life of the tribal villages. Besides exercising a general supervision over jungles, trees, tanks and embankments, he settles waste-lands for reclamation. He cannot be normally ejected, unless there is non-payment of rent, serious misconduct or oppression of the *raiyats*.

Khuntkattidars.

The term *khuntkatti* is employed to denote either a tenancy complying generally with the definition of a *mundari khuntkattidar* tenancy, except as regards race, or refers to the reclamation of land by any cultivator from jungle or wastes.

Raiyati Rights.

The right of a cultivating *raiyat* is known as *prajali*, a term which covers all that is denoted by occupancy rights. The right accrues from the moment the cultivator enters into possession of any land for cultivating purposes and not from the time that he pays rent for the land.

There have been several amendments to the Chotanagpur Tenancy Act securing more rights and keeping the existing rights of the *raiyats* more specific.

The *raiyats* have the right to reclaim waste-lands of the village and a right to the settlement of the vacant holdings. They may construct *bandhs* or water reservoirs for irrigation of their reclaimed lands. Homesteads, fruit-groves, water reservoirs, threshing-floors, and manure-pits are not assessed to rent. Uplands may be converted into rice lands without permission. The rights to the forests are almost the same as the rights existing in the Kolhan. Rights in trees are also similar to the rights in the Kolhan. They have complete rights over the timber and fruits or leaves of the trees on their lands. The *raiyats* have grazing rights over the jungles, waste and fallow lands of the *parganas*, except the reserved forests of Porahat. The *raiyats* have the right to take free of charge and without the permission of the proprietor, the less valuable minerals, such as, stone, iron ore, clay, lime-stone, etc., for their own domestic and agricultural purposes, and artisans have the right to sell articles manufactured from such products. All other mineral rights, however, belong to the proprietors.

Unfortunately, the tenants of Porahat, particularly in the Anandpur estate, were subjected to certain illegal exactions. There

was an agitation of the tenants under the leadership of one Andreas Munda against the *Thakur* of Anandpur which resulted in the conviction of the *Thakur*. There was also a "*Hari Baba*" movement among the people. These agrarian movements wanted to do away with the proprietor's excesses. The final relief to the tenants, however, came with the passing of the management of all those estates into the hands of the Government. Government took over the direct management of all those estates in 1934 when the estate escheated to Government after the death of the Raja Narpat Singh. The Anandpur and Chainpur estates passed into Government hands on the 27th February, 1937, and the 15th September, 1947, as wards estates, respectively, the former due to the insanity of the ruler and the latter owing to the minority of the proprietor. The estate of Kera was taken over on the 11th March, 1942, when the estate was found to be encumbered with heavy liabilities.

Many of the *thicadari* villages have since been assessed at half the prescribed rates. The present position of revenue from these estates is as follows :—

		Rs.	a.	p.
(1)	Porahat Estate	43,572	10	9
(2)	Anandpur Estate	39,766	5	4
(3)	Kera Estate	20,520	12	0
(4)	Chainpur Estate	10,839	5	3

Bandgaon is now included in the Porahat estate. However, under the Bihar Land Reforms Act, Anandpur and Chainpur vested in Government on the 15th June, 1955, and Kera and Bandgaon on the 1st January, 1956, like all other tenures in the district.

The administration of the Porahat estate after the estate escheated in 1934 is running practically on the same lines as that of the Kolhan estate, the only difference between the two being that whereas settlement of land in the Kolhan is restricted only to the aboriginals, in Porahat area there is no restriction and every resident tenant of the estate can acquire land within the area.

DHALBHUM.

Dhalbhum was run over in 1767 when the British installed the Raja's nephew Jagannath Dhal on the promise to pay an annual revenue of Rs. 5,500. Years of troubles followed when Jagannath Dhal fell in arrears. In 1777, the estate was settled with him as zamindari for a revenue of Rs. 2,000 for the first year, Rs. 3,000 for the second year and Rs. 4,000 for the third year. In 1800 the permanent settlement was extended to Dhalbhum and the revenue was settled at Rs. 4,267. At that time Dhalbhum formed a part of Midnapore but in 1833 it was transferred to Manbhum and in 1846 to Singhbhum. In 1867 the estate was taken under the management of the Court of Wards as Jagannath Dhal died leaving his minor sons. In 1881—83, a general survey

was made for 15 years. Ramchandra Dhal, the eldest minor son of Jagannath Dhal, received charge of the estate on attaining his majority. Shortly before his death he applied for relief under the Chotanagpur Encumbered Estates Act. The estate was then managed as an encumbered estate. On the death of Ramchandra Dhal in 1887 it passed, as a result of the law suits, into the possession of his uncle Satrughan Deo Dhabal Deb. By virtue of the will executed by late Raja Satrughan Deo Dhabal Deb, the estate passed on to Shri Jagdish Chandra Deo Dhabal Deb of Chilkigarh in the district of Midnapore in 1927.

The first Survey and Settlement Operations for Dhalbhum estate were initiated in 1906-07. This was necessary as when in 1903 the proprietor's manager attempted to make a new settlement, complaints were made of oppression, excessive enhancement and other mal-practices, the proprietor Satrughan Deo Dhabal Deb had leased out the estate for 25 years on terms which left little margin of profit to the lessees from the existing assets of the estate, and were a direct incentive to illegal rent enhancement and to interference with established rights.

Tenures.

Ghatwals.—One of the oldest tenures in Dhalbhum appears to have been that known as the *ghatwali* tenure. The *ghatwals* seem to have been originally guardians of the passes (*ghats*) or wardens of the marches, and for protecting the country against the invasion. The *ghatwals* were the guardians of peace and order and their tenures descended in the same line.

In 1800 the Raja of Dhalbhum was made responsible for the police administration in the estate and engaged to carry out his police duty through the *ghatwals*, whether *digwars*, *sardars*, *naiks*, or *paiks*. This arrangement continued till 1855 when the Raja was deprived of the police power owing to his incompetency. The control of the police was taken over by the Magistrates, and the zamindar ceased to have any authority over the *ghatwal*, by whose help he maintained the order. In 1865, the *ghatwals* were regularly organised, the entire estate being divided into *ghatwali* circle, each under a Chief or *sardar ghatwal*. Ten years later, the *ghatwali* holdings were reported to amount to 503 ploughs (*hals*) or 1,310 acres. They were subject to a quit-rent consisting of a fixed assessment of Rs. 2-2-0 per plough with miscellaneous dues amounting to Rs. 3-12-0; in all Rs. 5-14-0 per plough. As Government had taken over the police control, the land with the *ghatwals* became the property of Government. It was recognised that the tenure could not be transferred by the *ghatwal*, but that individual *ghatwal's* right might be removed for misconduct and others appointed in their places.

In November, 1884, in order to put a stop to the constant disputes about title that used to arise in connection with the

ghatwali holdings, an arrangement was arrived at between Government, the zamindar of Dhalbhum and the several *ghatwals*, and a deed of compromise was drawn up and duly executed and registered. It was agreed that the *ghatwali* lands should be demarcated according to the *ismnavisi* or rent-roll of 1837; that each *hal* of land recorded in that document should be held to consist of forty Dhalbhum *bighas* of rice land each ninety *haths* square; and that where the area of land recorded in 1837 was not sufficient to give to each *sardar ghatwal* (up to the number of those officials stated in the *ismnavisi*) at least two *hals* of forty such *bighas* to each *naik* and to each *paik* half a *hal*, a sufficient area of rice land in excess of the area entered in the *ismnavisi* of 1837 should be measured and demarcated as *ghatwali* land. The boundaries of each *ghatwali* holding were defined by masonry pillars and the chief cause of dispute in this way was removed. At the same time, all excess land found in the possession of the *ghatwals* was resumed by the zamindar of Dhalbhum and assessed to rent, that is, became *mal* land. These *mal* lands were classed in separate tenures called *ghatwali atirikta*, and the *ghatwals* concerned were designated as *ghatwali atirikta pradhans* for these tenures. They were heritable, partible and transferable.

Pradhans.—Most of the villages are leased out to headmen known as *pradhans*, who collect the rent and pay to the proprietor or superior tenure-holder *minus* a deduction by way of remuneration for collection. The origin of the *pradhan* lies in the clearance of the jungle and the first settlement of the village community. The superior tenure-holder assessed rent on this new village community for the lands and the community selected the chief member of the family which founded the village as the *pradhan* to collect the rent and act as the man for the contact with the other world. When the estate was under Government management, there were two kinds of *pradhani* tenures, one being for a limited and the other for an unlimited period. The former numbering (in 1833) 839 holdings, were held for a fixed term, and paid a rent which was liable to enhancement. The latter, numbering only 74, were held under permanent lease and the rent could not be enhanced.

Other Tenures.

Other tenures are *khorposh* or maintenance grants to members of the zamindar's family. Many of them are for life only, and others are resumable. *Babuan Khorposh* is a similar grant to deserving *amla* of the zamindar and has, therefore, a meaning different from that common in other places, where it implies a grant to a member of the grantor's family. The *chakran* is a form of service tenure which is apparently dependent entirely on the pleasure of the zamindar. The duties of the holders are to keep watch and ward over the zamindar's house and granaries. The

origin of the tenure is involved in obscurity, but it was perhaps created when the zamindar lost the services of the *ghatwals*. *Brahmottar* and *debottar* are religious tenures, both of which were originally held rent-free, but were charged with a quit-rent in 1837. The *brahmottar* tenures are transferable by the holder and appear not to be resumable by the original owner. *Debottar* tenures are grants made to priests for offering sacrifices to the zamindar's idols. Unlike the *brahmottar*, they are resumable by the proprietor when the priest by services ceases, and the grantee has no power to alienate his holding. *Mahatran* tenures are grants as rewards to persons for good service rendered, which are hereditable, transferable and non-resumable.

Khuntkatti Rights.

Cultivating tenures in Dhalbhum are known by the generic term *prajali* (from *praja*, a peasant) and are of two kinds, *khuntkatti* and *thika*. The word *khuntkatti* in Dhalbhum, as in Ranchi, is applied in its restricted sense to all lands cleared by the original settlers of the village or by their descendants in the male line; and the lands so cleared are held under the *khuntkatti* rights and title so long as they remain in their possession. It is stated that it has in this *pargana* a more extended sense embracing also lands reclaimed from jungle by later settlers in the village; but for the present only lands from the former class which correspond to the *bhuinhari* lands of Ranchi, have been recorded as *khuntkatti*. Several important privileges attach to the *khuntkatti* tenancies in the *pargana*. For instance, by law they are liable to only half the average rates of rent paid by the ordinary occupancy *raiyats* for the same class of lands. It was found, however, during the course of the settlement that the Courts had not clearly recognised their rights, and that they were assessed at full rates and in no way differentiated from ordinary *raiyati* holdings. This is said to be probably due to the fact that there is no definition of the word *khuntkatti* in section 19 of the old Chotanagpur Tenancy Act and that the aboriginals were not aware of their privileged rights nor prepared to uphold them in the Courts. Tenants holding lands under the *thika* system are persons who came into the village after the first settlers and acquired land by transfer or reclamation.

TATANAGAR KHASMAHAL.

The Tatanagar Khasmahal is a small estate with an area of 373.89 acres of land to the south-east of the Jamshedpur City. It is about a mile off from the Tatanagar railway station.

The land was originally acquired by the Government for the site of the subdivisional headquarters in 1920. This site was subsequently dropped and the Subdivisional Court buildings and staff quarters were constructed in the Sakchi area.

Out of total area of 373.89 acres, 156 acres of land was divided into 207 plots for settlement with the members of the public for building purposes. Out of the 207 plots, only 95 plots have so far been settled with different lessees and the rest of the plots have been suspended pending a proper planning and demarcation of the Khas Mahal land by the Government Town Planner. The existing *salami* is Rs. 200 per *bigha* and the annual rental is Rs. 40 per *bigha*. The average annual income out of this estate is Rs. 2,786 on account of the rental.

SERAIKELA-KHARSAWAN.

History.

The States of Seraikela and Kharsawan originally belonged to the parent State of Porahat some 54 generations before the advent of the British rule into this part of the country. A Rajput family of Marwar came and established in Singhbhum the Porahat Raj. Two hundred and seventy years before the establishment of the British rule the nucleus of the Seraikela estate was formed by Bikram Singh, the younger son of the then Raja of Porahat, who was given the *pir* known as Singhbhum *pir*, 50 square miles in area with 12 villages bounded north and south by the Sanjay and Kharkai rivers, respectively. Bikram Singh extended the limits of his domination by annexing Kandra, Dugni, Banksai, Kharsawan and Asantalia, from Patkum and also the Gamaria *pirs*. He granted Kharsawan, Asantalia, Dugni and Banksai *pirs* to the second, third, fourth and fifth sons, respectively, for their maintenance in the same way he had been given Seraikela. In course of time these two estates eclipsed the parent estate of Porahat in power and importance, when Bikran Singh annexed Kuchung *pir*, Icha and Sangria. The last two *pirs* he gave away to the second son Damodar Singh, who was the ancestor of the present maintenance holder of Icha. This tract had never come under Mughal or Maratha supremacy. In 1793, Seraikela entered into agreement with the East India Company regarding the treatment of the fugitive offenders. Ten years later Marquis of Wellesly, the then Governor-General, sought the assistance of Raja Abhiram Singh in war against the Marathas, assuring him that the British Government would respect his rights over Seraikela. Raja Arjun Singh of Porahat revolted against the British domination in 1857. Seraikela and Kharsawan rendered assistance to the British Government against him. Raja Arjun Singh was at last defeated and his estate confiscated. As a reward for these services Seraikela was given the Kerai-kela *pir*, whereas Kharsawan was given four villages, Satahaka, Simudiri, Somraidi and Dalki, in Sadant *pir* of Chakradharpur.

The land revenue administration in Seraikela and Kharsawan is, therefore, similar to that of Porahat because of their common

origin, with slight differences brought about in course of time by their Ruling Chiefs. They had, however, got separate record-of-rights known as the Seraikela Record-of-Rights and Kharsawan Record-of-Rights.

When these estates were merged in Bihar in 1948, all the provisions of the Chotanagpur Tenancy Act were extended to this area vide Government notification no. 1G-1-0119/51/LEG.—2655, dated the 15th December, 1951, as published in the *Bihar Gazette*, dated the 19th December, 1951, through a special enactment known as the Seraikela and Kharsawan Laws Act, with the exception that the record-of-rights in respect of the rights and duties of village headmen prepared and the *pattas* granted under any of the enactments in force in the subdivision before the commencement of this Act were kept intact. It was, however, stipulated that any Court or other authority may construe the said Act with such alterations not affecting the substance as may be necessary or proper to adapt it in the matter before the Court or other authority.

The first settlement both in Seraikela and Kharsawan was carried out in 1904—07 by Mr. C.W.E. Connolly. This was followed by Revisional Settlement in the year 1925—28 by Khan Sahib Abdul Hakim.

The previous Seraikela estate is divided into seven *pirs*, besides Seraikela. These are (1) Dugni, (2) Banksai, (3) Icha, (4) Gamharia, (5) Kandra, (6) Kuchung, and (7) Sadant. They were held by the *pirpattidars* till 1955-56, when they were taken over by Government under the Bihar Land Reforms Act.

Tenures.

Pirpattidars.—The *pirpattidars* came into existence when the Ruling Chief gave areas to junior members of his family for their support. They were maintenance tenures and were always regarded as subordinate to the Chief. In the first revenue settlement, it was directed that the (1) proprietors of the Banksai and Dugni *pirs* should be recorded as *pirpattidars* or maintenance holders, (2) that the holding is in each case impartible and (3) that on failure of male heirs, it reverted to the Chief of Seraikela. Subsequently orders were passed that the proprietors of Icha and Sargharia *pirs* should be recorded as the holders of maintenance grants subject to certain conditions of service, and the laws mentioned above should also apply in this case. It was further held that the holders are only liable to render such service to the Chief of Seraikela as he in his turn is liable to render to the British Government.

Khorposh.—The Chief granted tenures known as ***khorposh*** to the other relatives for their maintenance and the ***khorposhdars*** held the tenures rent-free and paid a contribution towards the upkeep of the police. They are also liable to render certain service, which

formerly were of a military nature, such as, supplying livery for the army of the Chief but such service naturally fell into disuse. The *khorposhdars* for years before the estate integrated to Bihar attended the ceremonials of the Court like marriages, etc., and were ornamental appendages to the Chief. The *khorposhdars*, who are, as a rule, petty tenure-holders with one to six villages and the grants are resumable. Under a Government Resolution of 1904 no native chief was bound by any grant made by his predecessor.

Chakran.—Chakran or *nokran* are service tenures, that is, grants made to the persons on the understanding that they are liable to render certain services. Their duties were generally the same as those of *khorposhdars*, except that the mere petty holders sometimes used to convey messages for the Chief and carry out instructions regarding supply of *rasad*, etc. The *chakran* tenure-holders were also liable for domestic work of the Ruler and his family members for supply of betels, flowers, etc., on occasions for various kinds of odd jobs and for military service when required. The lowest class of service holders were known as *sardars*, *paiks* and *gohondals*. There were also some tenures known as *pan-pik* and the duty of the grantee was to hold up the bowl in which the Chief will spit out when chewing betel.

Religious grants.—The total area of land held by service tenure-holders in Seraikela portion of the subdivision comes to 26,558 *bighas*, 7 *kathas* and 8 *dhurs*. More than half of this *bigha*, that is, 14,928 is held by military service tenures. There were also religious grants known as *brahmottar*, *debottar*, etc. In the Revisional Settlement in 1904—07, the Raja claimed that these grants were resumable and the holders had to do duties, such as, praying in the Raja's temple for his health and supplying two days' labour in thatching the house. This claim though repudiated by the holders, it was found that such conditions had been entered in the *pattas*. All these grants were held resumable under Government orders, though the grantees did not admit this. The *brahmottar* tenure-holders were determined opponents of the estate and they persuaded the *raiyats* to state whenever possible that the lands were not *prajali* or occupancy lands but were held in *thika* for a certain number of years.

Mafi.—Mafi tenures were given grants free of all conditions for some service rendered to the Chief or *khorposhdars*.

Settlement, 1904—1907.

It will thus be seen that most of the types of tenures were peculiar to the institution of a Ruling Chief. The first revenue settlement of Seraikela took place along with that of Kharsawan in 1904—07 and was conducted by Mr. C. W. E. Connolly, a Deputy Collector in the service of Bengal Government. It was

at this settlement that the land was for the first time divided into classes according to fertility and production and a fair rent was fixed for each class. Before that rent was assessed at a uniform rate on all rice-producing lands irrespective of fertility. At that settlement, rent was fixed for different class of lands at the rates shown in the following table:—

	Bera.	Nala.	Don 2.	Don 3.	Gora.
	Rs. a.	Rs. a.	As.	As.	As.
Singhbhum *Pir*	1 4	1 2	11	9	2
Kuchang *Id*	1 0	0 13	12	8	2
Korai Kela *Id*	1 0	0 13	10	6	2
Banksai *Id*	1 0	0 13	10	6	2
Dugni *Id*	1 0	0 13	10	6	2
Icha *Id*	1 2	1 0	11	7	2

In the Government resolution reviewing the report of the Settlement Officer, it was mentioned that in most of the Seraikela *pirs*, the problem of assessment was complicated by the fact that joint produce and cash rents were paid by most tenants for the lands held by them, no distinction being possible between the produce paying and the cash paying areas. The solution adopted was to leave the produce rents untouched, but to take their double value into account in fixing cash rent for different classes of soil. Throughout the calculation, the value of the produce rent was taken to be Re. 1 per maund. Unfortunately, the cash rates so determined were applied to all tenancies alike without taking into account the variations in the distribution of produce rents among new villages and *raiyats*. The conclusion was that the rents fixed were uneven in their incidence.

This defect was considered in a conference at Chaibasa at which the Commissioner, the Director of Land Records, the Deputy Commissioner and the Settlement Officer were present. The conference concluded that as the produce rents had been valued at Rs. 1 per maund in determining the cash rates, the recoverable cash equivalent to the produce rent should be fixed at Re. 1 per maund. It was thought that this would to some extent remove the defect of assessment mentioned before.

Revisional Settlement, 1925—1928.

The records prepared at the Connolly's Settlement were made in Hindi. The Connolly's Settlement was to be enforced for 20 years. Accordingly the Ruler appointed Sk. Abdul Hakim, a Sub-Deputy Collector in the service of the Bihar and Orissa Government, to be the Settlement Officer of Seraikela. Under

his supervision the settlement operations took place from the 24th October, 1925, to the 31st March, 1928. The then existing rent was again revised at this settlement and lands reclaimed since the Connolly's Settlement were assesed to rent. The records of this settlement were prepared in Oriya language.

Seraikela Records-of-Rights Act.

The land laws of the former Seraikela estate were embodied in what was known as Seraikela Records-of-Rights Act. Corresponding to the occupancy rights elsewhere, there were *prajali* rights in Seraikela. The distinction between occupancy and non-occupancy *raiyats* was unknown in Seraikela. A *raiyat* had the right of occupancy known as *prajali* in all lands entered in his name. This right accrued where he had cultivated land for 20 years or had taken it over a day before and it accrued even in the case of upland (*gora*). The *raiyat* also acquired the same occupancy right in house and homestead land (*bari*). They could not be ejected except by the decree of a competent Court and his rent was not liable to enhancement during the term of the settlement, that is, 20 years, except on the ground of increase in the area caused by his reclaiming fresh land or taking over additional lands. He was also entitled to the fruits grown, thrashing floor and manure pits rent free. Timber or tree, whether on record or waste-land, belonged to the landlord. Some concessions were, however, given by the Rulers some time before the merger. No transfer of land was permissible except with the previous consent of the landlord and exorbitant *salami* was charged. This *salami* was not credited into the treasury but was paid direct to the Ruler. If a *raiyat* failed to pay his rent he had to surrender the holding to the village headman.

Thika.

As transfer of land was not prevalent in the estate, a kind of temporary transfer in the name of *thika* settlement was popular. All classes of land-holders could lease land on *thika* for a term not exceeding five years at a time. The *thikas* were created both orally and by written decuments.

After the expiry of this term the land was resumed, unless it was chosen to be leased out again at *thika*.

Non-agricultural tenants did not pay any rent. They had been recorded as *gharbari prajali* and their holdings as *belagan*. Under-*raiyats* were recorded as *sikmi raiyats* and were mere tenants at will who could be removed by superior *raiyats*.

Pancha.

A kind of *abwabs* known as *pancha*, used to be paid for police purposes. *Pancha* rates were over and above the rent and the idea was that the money collected should go for the maintenance

of a police force. In Singhbhum, each village used to pay Re. 1 and three goats as *vakil, thakurani* and *debraji panchaks* and in Kuchang *pir* one rupee and three goats as *thakurani pancha.*

Pradhan.

The village headman was known as *pradhan, thikadar* or *munda* in each village and it was his duty to collect and pay rent to the zamindar of the village. He was liable to be ejected, if the rent of two *kists* in the same year was in default. His remuneration consisted either of enjoying certain rent-free land (*man*) or by a commission (*nala*) of 10 pies in the rupee of the total rent of the village. His chief privilege was in settling new and abandoned land with the *raiyat* and he enjoyed the new rent within the terms of the settlement. The village headman also had a certain police work to do and was a link between the nearest police-station and the *raiyats.* He was bound to help in arresting offenders and for the supply of *rashad* and also to maintain the village roads with the help of the Raja. Usually the post was hereditary but the village headman could be ejected by order from a competent Court.

KHARSAWAN.

The pattern of Land Revenue Administration in Kharsawan estate, which has also merged in Bihar, was the same as that in the Seraikela estate. As in Seraikela, the chief land tenures are *khorposh* or maintenance grants, *chakran* or *nokran,* that is, the service grants and religious tenures. Accordingly, tenants as *praja'i* or occupancy *raiyati, thika* leases, etc., were known.

Connolly's Settlement, 1904—07.

Mr. Connolly conducted the settlement operations for Kharsawan also in 1904—07 and fair and equitable rent was fixed for the first time during this settlement according to the fertility of land. The records of Connolly's Settlement for Kharsawan were prepared in Hindi.

Revisional Settlement, 1925—28.

The Revisional Settlement of Kharsawan also took place at the same time when the revisional settlement in Seraikela took place (1925—28). In Kharsawan, this was conducted by Sri Indra Bilas Mukherji, the then Superintendent of Land Records, Sambalpur and the records were prepared partly in Oriya and partly in Hindi languages.

Khuntkatti Tenures.

Khuntkatti tenures, unknown in Seraikela, are found in Kharsawan only in the Kolhan *pir* where the majority of the inhabitants are the aboriginals. In the first settlement of 1904—07 all those who were found to be descendants of the original tillers of the soil, were entered as having *khuntkatti* right in the land

their ancestors had acquired. The privileges were (1) the right to convert up lands into low lands and to make new land without any one's consent, (2) the right of fuel wood for use for agricultural implements free of cost but not for purposes of sale and (3) the right to grow tusser in their own villages.

Connolly's Settlement records were attested and rent settled in 194 villages contained 9,294 tenants and 1,10,716 plots. The rates fixed per local *bigha* were according to the table below:—

	Bera.	Nali.	Don 2.	Don 3.	Gora.
1	2	3	4	5	6
	Rs. a. p.	Rs. a. p.	As.	As.	As.
Sadant *Pir*	1 8 0	1 6 0	14	11	2
Kolhan *Pir*	0 14 0	0 12 9	8	6	0

Cess.

As mentioned above, the Cess Act has not been enforced in Seraikela-Kharsawan. They had their various kinds of cess as mentioned below:—

Police Cess.—The *raiyats* of Seraikela pay police cess over and above their rents for maintenance of police force at the rate of 10½ pies per *bigha* of *bera* lands, 9 pies per *bigha* of *nali* lands and 3 pies per *bigha* of don 2 lands. But in Kharsawan the rate is 2 annas and six pies per rupee.

Education Cess.—The tenants of Kharsawan have to pay education cess at the rate of 1 anna per rupee.

Takoli *Cess.*—The *pirpattidars* of Dugni and Banksai were assessed to *takoli* cess at 15 per cent on the actual amount of land revenue on all lands with the exception of *gohandali* lands lying in their *pirs*. The rate was increased to 20 per cent in case of Icha in 1934. In Kharsawan *takoli* cess at the rate of 20 per cent of the land revenue was paid by the tenure-holder of Raidih. This was realised towards the cost of administration. The *takoli* cess realised in kind have been commuted by Government at Re. 1 per maund.

Khandiani Cess.—The tenure-holder of Raidih used to pay a cess called *khandiani*. This was to commemorate the previous defeat and for the worship of the *khand* or the sword.

CHAPTER XVIII.

GENERAL ADMINISTRATION.

Administrative Jurisdiction,

The civil and revenue system being governed by the Chotanagpur Tenancy Act in the district and by the Wilkinson's Rules in Kolhan proper, the administrative head of the district is designated as Deputy Commissioner. The Commissioner of the Chotanagpur Division is, for all intents and purposes, the highest tribunal for the tenants of the district subject, of course, to the control of the Board of Revenue. That is why of the three appellations, i.e., Deputy Commissioner, District Magistrate and Collector, the first one is the most commonly known.

The traditional headquarters of the district since 1834 has been Chaibasa although from 1942 till 1953 the Deputy Commissioner had his headquarters at Jamshedpur owing to the situation created by the Second World War. Jamshedpur with her steel production had a special importance and special air raid precautions had to be organized there. During this period, the Additional Deputy Commissioner -like all other districts in Bihar, this district is also provided with an Additional Collector who also is commonly known as Additional Deputy Commissioner—remained at Chaibasa. In 1953 the headquarters of the Deputy Commissioner were again transferred to Chaibasa.

The district is divided into three subdivisions, Sadar, Dhalbhum and Seraikela. The Sadar subdivision, comprised mainly of the Kolhan and Porahat estates, is the largest. The particular importance of the Sadar subdivision lies in its being the heart of the Adibasi territory, needing the special care of Government for the advancement of the tribals. Dhalbhum, however, has, during the last half century, acquired a unique position due to the rapid expansion of Tata Iron and Steel Works and Automobile and Locomotive Works, Tisco and Telco, and various other factories of all-India importance and status at Jamshedpur and the development of copper mines and works of the Indian Copper Corporation at Mosabani and Maubhandar. Seraikela and Kharsawan were Native States that acceded to the Indian Union with the integration of States in 1948. There was some controversy raised by some sections over the question whether these States should be added to Bihar or to Orissa. In accordance with the wishes of the people, Government of India had decided to integrate them with Bihar and this decision was confirmed by the recommendations of the States Reorganisation Commission in 1956. The implementation of the Commission's report resulted in transfer of a part of the old Manbhum district to West Bengal and addition of some of the remaining portions to Singhbhum in October, 1956. The portion made over to Singhbhum comprised of three police-stations, Patamda, Ichagarh and Chandil. Patamda was added

to Dhalbhum subdivision and Ichagarh and Chandilto the Seraikela subdivision.

The dimensions of the district now are as follows :—

Name of subdivision.			No. of police-stations.	Area.	Population.
Sadar	..	..	8	2,718 sq. miles	6,67,390
Dhalbhum	..	..	9	1,377 sq. miles	6,77,881
Seraikela	..	..	6	974 sq. miles	3,39,924
			23	5,069 sq. miles	16,85,195

Administrative set-up.

The Deputy Commissioner, like other District Officers, is in general charge of the whole dristict. But within the civil district there are two police districts. Because of the size and importance of Jamshedpur, one Superintendent of Police (commonly known as Additional Superintendent of Police) is provided for the Jamshedpur town, comprised of the police-stations of Golmuri, Sakchi, Bistupur and Jugselai. After the transfer of territories between Bihar and West Bengal in October, 1956, Chandil and Patamda areas only were at first added to the jurisdiction of the Additional Superintendent of Police, Jamshedpur. But, subsequently, Ichagarh was also joined with the jurisdiction of the Additional Superintendent of Police. The remaining part of the district is under the Superintendent of Police, Singhbhum with headquarters at Chaibasa.

At the district headquarters there is a post of Additional Deputy Commissioner who has also powers of Additional Collector and Additional District Magistrate. But in addition to the usual magisterial strength, there is also a post of a Kolhan Superintendent. This officer is charged with the special duty of looking after the Kolhan and Porahat areas, including the working of Wilkinson's Rules. This officer is independent of the Sadar Subdivisional Officer and is generally an experienced Subdivisional Officer himself. Now, after the abolition of Zamindari in the district, he also functions as a second man to the Additional Collector in almost all revenue matters relating to Kolhan and Porahat areas. (For details of Kolhan Administration please see the section at the end of this chapter.)

Singhbhum does not have a Judgeship of its own. The headquarters of the District and Sessions Judge is at Dhanbad. But there are at present two Sub-Judges and three Munsifs at

Jamshedpur and the District and Sessions Judge occasionally holds Circuit Courts at Chaibasa, Jamshedpur and Seraikela. The other judicial officers also hold Circuit Courts. One of the Sub-Judges has Sessions powers also and one of the Munsifs has magisterial powers.

The subdivisions have the usual strength of officers except that there are posts of a City Magistrate and an Assistant Rationing Officer at Jamshedpur. The City Magistrate is usually an experienced Deputy Magistrate. He is in exclusive charge of the criminal cases in Jamshedpur and he also assists the Subdivisional Officer in the administrative work relating to Jamshedpur. In the Seraikela subdivision, two Advisory Councils, for Seraikela and Kharsawan respectively, have been retained by Government after the accession of these Native States. The Deputy Commissioner is the President of these two Councils and the Subdivisional Officer is a member. Excepting them, the Seraikela Advisory Council has 20 non-official members and the Kharsawan Advisory Council 6. Out of these, 2 and 1 members are to be nominated by the ex-Rulers of Seraikela and Kharsawan, respectively. These members receive a salary of Rs. 75 per month. These Councils have a purely advisory capacity; they meet once every month.

The following are some other departmental officers with jurisdiction over the whole district stationed at Chaibasa:—

(1) Civil Surgeon, (2) Executive Engineer, P. W. D., (3) Electrical Executive Engineer (Supply), (4) District Medical Officer of Health, (5) District Animal Husbandry Officer, (6) District Industries Officer, (7) District Statistical Officer, (8) District Inspector of Schools, (9) District Inspectress of Schools, (10) District Superintendent of Education, (11) District Engineer, (12) District Agricultural Officer, (13) District Mining Officer, (14) District Welfare Officer and (15) the Superintendent of Excise.

The Waterways and the Public Health and Engineering Departments do not have any Executive Engineer for the district and they have posts as Subdivisional Officers. That is because the work-load in these departments in this district has not reached the standard justifying an officer at district level. The Electricity Department (Works Branch) have not even a Subdivisional Officer in the district because the number of Government buildings is still rather small. The Subdivisional Officer of this department stationed at Ranchi is in charge of the district. The State Labour Department treat Jamshedpur as the headquarters for the whole of Chotanagpur Division and the Assistant Labour Commissioner for Chotanagpur is posted there. He has one Labour Superintendent and one Labour Officer for Jamshedpur and another Labour Officer for Chaibasa. The factories are looked after by the State Government's Labour Department and the mines by the Government of India's Labour Ministry. But, by an internal arrangement

the mines and quarries attached to the factories are also looked after by the State Government's Labour Department. The Government of India's Regional Labour Commissioner, in charge of this district, is stationed at Dhanbad. The Labour Department have two other officers posted at Jamshedpur. The Inspector of Boilers is in charge of Ranchi and Singhbhum districts and the Inspector of Factories is in charge of Singhbhum only.

The district is very important from the point of view of forests. As many as five Forest Divisions are comprised within the district, i.e., Saranda, Kolhan, Porahat, Chaibasa and Dhalbhum. Each of these Divisions is under a Deputy Conservator of Forests, commonly known as Divisional Forest Officer. Another functional Division has been carved out in the district for afforestation purposes under a separate Divisional Forest Officer.

For the Commercial Taxes Department, Singhbhum is a very important charge. A Superintendent of Commercial Taxes with his jurisdiction over the district is stationed at Jamshedpur. He has three Assistant Superintendents, two for Dhalbhum and one for the Sadar subdivision.

The district is also important from the point of view of Income-tax. The Appellate Assistant Commissioner of Income-tax, with jurisdiction over the Singhbhum Circle and Sambalpur-Jharsuguda Circle is stationed here. The Singhbhum district is one Circle for the Income-tax Department and is managed by four Income-tax Officers with the seniormost of them being in administrative charge of the whole Circle.

The Ministry of Works, Housing and Supply, Government of India have established their Directorate of Inspection (Metallurgical) at Jamshedpur with jurisdiction over the industries in Dhalbhum subdivision and at Shyamnagar and Burnpur in West Bengal. The department is under a Director with 26 gazetted officers under him. The Ministry of Food and Agriculture, Government of India, have placed an officer designated as Technical Officer to remain incharge of Government of India's foodgrains godown at Jamshedpur.

The Government of India, in the Ministry of Education and Scientific Research, have established the National Metallurgical Laboratory at Jamshedpur, one of the National Laboratories—commonly known as "the chain laboratories"—in India. Details of this Laboratory will be found in the Chapter "Jamshedpur".

Civil Justice.

Singhbhum was, until 8th March, 1910, under the jurisdiction of the Sessions Judge of Bankura. In 1904, the Sessions Judge of

Bankura was appointed as the Additional Sessions Judge for Chota-nagpur with power to try all sessions cases and criminal appeals arising within the districts of Singhbhum and Manbhum. Sessions cases were tried by him at Purulia and criminal appeals either at Purulia or Bankura. As regards civil suits, the Subordinate Judge of Purulia used to visit Chaibasa twice a year for disposal of civil business. The Munsif of Purulia used to visit Chaibasa four times a year to dispose of the pending suits. During the absence of the Subordinate Judge of Purulia, the Deputy Commissioner of Singhbhum exercised the powers of the Subordinate Judge. During the absence of the Munsif of Purulia, civil suits were disposed of by one of the Deputy Collectors vested with powers of a Munsif for the trial of suits arising in the municipality of Chaibasa, in thana Ghatsila and in those parts of thanas Chakradharpur and Monoharpur, falling outside the Kolhan Government Estate, in which the Civil Procedure Code has not been introduced.

With effect from 9th March, 1910, a separate Civil District and Sessions Division consisting of the districts of Sambalpur, Singhbhum and Manbhum was created. It was styled as Manbhum-Sambalpur Judgeship. The Court of the Judge of Manbhum-Sambalpur was to hold its sittings at Purulia for the disposal of business arising in the districts of Singhbhum and Manbhum and at Sambalpur for the disposal of business arising in that district.

The Subordinate Judge of Sambalpur was appointed the *ex-officio* Subordinate Judge of Singhbhum and he used to sit at Chaibasa from time to time for disposal of civil matters arising in the district of Singhbhum.

The municipality of Chaibasa, the thana of Ghatsila and that part of the thanas of Chakradharpur and Monoharpur which did not fall within the limits of the Kolhan Government Estate, in the district of Singhbhum, were formed a separate unit under a Munsif with headquarters at Jamshedpur with effect from 1st April, 1927. The Munsif appointed to the charge thereof was to hold his Court at Jamshedpur and to sit at Chaibasa from time to time for disposal of business arising within the municipality of Chaibasa and those parts of thanas Chakradharpur and Monoharpur which are situated outside the Kolhan Government Estate.

On the creation of the Province of Orissa in the year 1936, the district of Sambalpur was attached to Orissa and the districts of Manbhum and Singhbhum remaining in Bihar were constituted into a separate Judgeship styled as Manbhum-Singhbhum Judgeship. The Court of the District Judge of Manbhum-Singhbhum was required to hold its sitting at Purulia for disposal of business arising in the districts of Manbhum and Singhbhum and in Chaibasa for disposal of matters arising in the district of Singhbhum and

the Court of Sessions of the Sessions Division of Manbhum-Singhbhum was to hold its sitting at Purulia, Chaibasa, Dhanbad and Jamshedpur.

Under notification dated the 13th January, 1937, the districts of Manbhum and Singhbhum were formed into a new Subordinate Judgeship and the Subordinate Judge of Manbhum-Singhbhum was to sit at Purulia for the trial of cases arising in the districts of Manbhum and at Chaibasa for the trial of cases arising in the district of Singhbhum.

The States of Seraikela and Kharsawan in the district of Singhbhum merged into the State of Bihar in 1948. Accordingly, the jurisdiction of the Manbhum-Singhbhum Judgeship and Sessions Division was extended to the areas comprised within Seraikela and Kharsawan (vide Judicial Department notification no. 4227-J, dated the 29th May, 1948). The jurisdiction of the Court of Subordinate Judge of Manbhum-Singhbhum was also extended over Seraikela and Kharsawan (vide no. 4229-J, dated 29th May, 1948). Similarly the jurisdiction of the Court of the Munsif of Jamshedpur was also extended over that area (vide no. 4228-J, dated 29th May, 1948). The Munsif of Jamshedpur was required to sit at Seraikela from time to time for disposal of business arising within Seraikela and Kharsawan.

The Court of the Subordinate Judge of Singhbhum, including the areas comprised within Seraikela and Kharsawan, with headquarters at Chaibasa was created from 7th November, 1949 and the Subordinate Judge of Singhbhum was required to sit at Jamshedpur for the trial of cases arising within the Dhalbhum subdivision for a period of three weeks every month. Subsequently, the Court of the Subordinate Judge of Singhbhum was permanently located at Jamshedpur from 3rd August, 1951. The Subordinate Judge visits Chaibasa frequently for disposal of business arising within the Sadar subdivision of Singhbhum. The cases arising within Seraikela-Kharsawan subdivision are tried in Seraikela by the same Subordinate Judge.

The Additional Deputy Commissioner of Singhbhum exercised the powers of a Subordinate Judge and he used to make the cases ready for hearing by the regular Subordinate Judge of Jamshedpur up till 1955. The Additional Deputy Commissioner has since been relieved of his judicial functions as Sub-Judge in view of his increased duties as Additional Collector. A Deputy Collector has been vested with the powers of a Sub-Judge. But the Deputy Commissioner still continues to be the *ex officio* Sub-Judge. A Sub-Deputy Collector at Chaibasa and another at Seraikela are vested with powers of a Munsif; they remain in charge of the file of Munsif at those places and make the cases ready for hearing by the regular Munsif of Jamshedpur.

The following table gives an idea of the volume of civil litigation in the district :—

Year.				Number of civil suits instituted—	
				Under ordinary procedure.	Under S.C.C. powers.
1922	..	..	..	227	620
1932	..	..	..	533	1,255
1942	..	..	..	501	838
1952	..	..	..	949	699
1953	..	..	..	1,111	990
1954	..	..	..	1,240	1,032
1955	..	..	..	984	1,345
1956	..	..	..	1,067	946

Police.

An old document shows that in 1840 there were 778 Chowkidars or village police as against 2,357 in 1860. When the British came into the district they found that there was already existing a machinery for protecting the district. The pivot of this system were the *mankis* and *mundas* and the figures quoted for 1840 and 1860 give the man-power of that machinery previous to the introduction of the present police. These figures were collected from the office of the Deputy Commissioner of Singhbhum in response to letter no. 3627, dated Fort William, the 3rd November, 1869 from Rivers Thompson, Officiating Secretary to the Government of Bengal in the General Department. This letter was circulated to all the District Officers with enclosures to collect information and statistics for the compilation of the Bengal Gazetteer by W. W. Hunter. *

The district of Singhbhum at one time consisted of only 3 police-stations, namely, Chakradharpur, Ghatsila and Monoharpur and 4 out-posts, namely, Asanbani, Baharagora, Chaibasa and Kalikapur. The Kolhan, as a non-regulated area, was not given the ordinary police administration till very recently. Kolhan had its organisation of *mankis*, *mundas* and *dakuas* to run the police administration and the District Magistrate had the direct responsibility for the policing of Kolhan. The system worked very well as long as the group life of the tribal people continued untouched. As the aboriginals had more of contact with the non-aboriginals and saw more of the individual life of the non-aboriginals, their life started becoming complex, crime began to increase

*For further investigation please see "Singhbhum old Records" published separately (P. C. R. C.).

and the tendency to confess a crime had an ebb. The hold of the *mankis* and *mundas* also relaxed and it became necessary to give the aboriginal areas the protection of regular police.

In 1950, the police work of Kolhan was taken over by the Police Department and 4 new police-stations of Jhinkpani, Manjhari, Manjhgaon and Noamundi were created. One Noamundi police-station had existed previously with its headquarters at Jamda but after the police reorganisation of Kolhan, a new police-station was carved out with headquarters at Noamundi.

The district of Singhbhum has now two police districts within itself in the charge respectively of a Superintendent of Police at Chaibasa and another at Jamshedpur. The Superintendent of Police at Jamshedpur is known as Additional Superintendent but he functions independently of the Superintendent of Police, Chaibasa. There are 17 police-stations in the Chaibasa police district.

Sadar Subdivision.

1. Chaibasa Sadar.
2. Chaibasa Mufassil.
3. Chakradharpur.
4. Manoharpur.
5. Jhinkpani.
6. Noamundi.
7. Manjhari.
8. Majhgaon.

Dhalbhum Subdivision.

9. Ghatsila.
10. Chakulia.
11. Baharagora.
12. Potka.

Seraikela Subdivision.

13. Seraikela.
14. Kharsawan.
15. Adityapur.
16. Govindpur.
17. Ichagarh.

The four police-stations of Seraikela, Kharsawan, Govindpur and Adityapur were added to this district after the accession of the Native States of Seraikela and Kharsawan to the Indian Union and then joined with Singhbhum in May, 1948. Great difficulties were experienced in organising police work here which was managed by the Native Rulers in an entirely different manner.

The Singhbhum police district is divided into four police circles under Circle Inspectors at Chaibasa, Jhinkpani, Ghatsila and Seraikela. A post of a Deputy Superintendent of Police had been created for the Seraikela subdivision but due to the necessity of assistance to be received from a gazetted officer by the Superintendent of Police, Chaibasa, this officer is now placed at Chaibasa. There are six out-posts and four town out-posts. There used to be eight *shivirs* or smaller police out-posts in the interior but they have been recently abolished. The area within Dalbhanga out-post of Ranchi district was transferred to the Chaibasa police district in August, 1954 when some villages from Ranchi district were added to Singhbhum.

The post of the Superintendent of Police at Jamshedpur was created on the 20th September 1933, mainly in consideration of the importance of the Jamshedpur city. Till sometime ago the Additional Superintendent of Police, Jamshedpur, had very little mufassil areas under him. The major part of the four police-stations under him, namely, Jugselai, Bistupur, Sakchi and Golmuri, were comprised in the town itself. In October, 1956, however, when the police-stations of Chandil, Patamda and Ichagarh were added to Singhbhum after the reorganisation of the States, Chandil and Patamda were added to the jurisdiction of the Additional Superintendent of Police, Jamshedpur and Ichagarh was added to that of the Superintendent of Police, Chaibasa. In September, 1957, this arrangement was, however, modified and Ichagarh was put under the Additional Superintendent of Police of Jamshedpur. There is one post of Deputy Superintendent of Police at Jamshedpur. There are two Circle Inspectors, out of whom one is earmarked only for traffic. Jamshedpur has a growing traffic problem.

The major crimes are murder, dacoity, riot, theft and burglary. Murder is more confined to the interior aboriginal areas. Dacoities are not very typical of the aboriginal areas, and, more often than not, the criminals hail from other districts and are non-aboriginals. Riots are quite common because of the impulsive nature of the people. Riots also frequently take place in the mining and industrial areas amongst labourers as a result of rivalry between labour unions. A number of such riots have been witnessed of late, simultaneously with the progress of trade union movement. This movement frequently degenerates into a bid for personal power and the workers align themselves on two sides and come to a clash. Burglary and theft are also typical more of the advanced industrial areas rather than of the aboriginal tracts. Burglaries and thefts, as could be expected, frequently take place at Jamshedpur city because of the congested population. Murder is very often committed amongst aboriginals when the *shokha* (Priest) declares a woman to be a witch. Another very common crime is the theft of copper wire from telephone and telegraph line.

The crime figures for 1952—56 are as below :—

	Year.	Murder.	Dacoity.	Robbery.	Riot.	Burg-lary.	Theft.
1	2	3	4	5	6	7	8
Singhbhum police district.	1952	55	32	23	30	241	501
	1953	57	38	32	35	323	467
	1954	47	23	13	35	211	390
	1955	37	25	11	57	249	447
	1956	44	24	18	71	234	726
Jamshedpur police district.	1952	10	13	13	9	225	498
	1953	13	13	14	10	214	583
	1954	13	6	12	15	268	735
	1955	14	8	6	13	272	656
	1956	18	4	6	30	292	562

The following figures will give an idea of the volume of criminal cases in the district in Magisterial Courts for the same period :—

Year.					Total no. of cases for disposal.
1952	..	..	..	..	8,004
1953	..	..	..	..	8,681
1954	..	..	..	..	8,753
1955	..	..	..	..	9,219
1956	..	..	..	..	9,073

Motor Vehicles.

As elsewhere in the State of Bihar, the motor vehicles on hire are the concern of the police. The district falls within the jurisdiction of the Regional Transport Authority, Chotanagpur, of which the Commissioner of Chotanagpur Division with Ranchi as his headquarters is the Chairman. There is a paid whole-time Secretary.

In 1957-58 there were 1,088 trucks (public and private carriers), 113 buses, 190 taxi cars and 1,516 cars.

The Kolhan roads used to be looked after with the special budget of Kolhan but arrangements are now being made for transferring the Kolhan roads to some other department of Government that looks after roads. This has become necessary when the Khas Mahal of Kolhan lost its peculiar entity after the abolition of Zamindari all over Bihar. The Forest Department has rights to close their roads during bad season and also charges tolls because these roads were constructed primarily for the work of that department. Due to a large number of industries and extensive mining, the number of trucks is fairly high.

REVENUE AND TAXES.

Land Revenue.

The following tabular statement submitted by the Deputy Commissioner of Singhbhum in response to letter no. 3627, dated Fort William, the 3rd November, 1869, from Rivers Thompson, Officiating Secretary to the Government of Bengal, in the General Department previoulsy referred to will be of interest.

Statement showing the number of Estates upon the Rent Roll of the District with the total Land Revenue they paid, and the number of registered proprietors paying rent direct to Government.

	1790 (or first year of which records remain), 1837.	1800	1850	1870-71 (Budget Estimate).
1	2	3	4	5
Number of estates ..	1	..	2	3
Number of registered proprietors or coparceners ..	..	..	1	1
Total land revenue paid ..	5,234	..	11,330	57,377
Average land revenue paid by each estate ..	5,234	..	5,665	19,126
Average land revenue paid by each proprietor or coparcener ..	..	..	4,267	4,267

As elsewhere in the State, the Zamindaris stand abolished. During 1956-57, the arrear demand for rent was Rs. 3,81,114 and the current demand was Rs. 12,49,829. The total collection during 1956-57 amounted to Rs. 12,60,107.

Excise.

This is the next important source of revenue. Government of Bihar's scheme for outstill liquor shops for the benefit of aboriginals

is in force in some areas of the district. The number of excise licensees during 1956-57 has been as follows :—

Distillery liquor	71
Outstill liquor	30
Ganja	34
Bhang	20
Opium	28
Pachwai	122
Toddy	8
Foreign liquor and commercial spirit	109

The Excise revenue has been as follows during the last five years :—

	Rs.
1952-53	37,10,492
1953-54	33,69,403
1954-55	34,82,959
1955-56	36,36,200
1956-57	41,09,268

Cess.

Cess is levied at the rate of 1 anna per rupee of profit. During 1956-57, the arrear demand of cess was Rs. 2,05,976 and current demand was Rs. 5,58,597. Total collection during 1956-57 amounted to Rs. 3,54,739.

Mining.

Mining, both extraction and prospecting, is an important source of revenue in the district. The total demand on mining business during 1956-57 was Rs. 25,20,915, out of which Rs. 18,08,723 was collected.

Registration.

There are three offices for the registration of assurances under Act XVI of 1908, located at Jamshedpur, Chaibasa and Seraikela. At Seraikela one of the Magistrates functions as Sub-Registrar, while there is a Sub-Registrar each for Chaibasa and Jamshedpur.

The Deputy Commissioner is the District Registrar. The following figures will give an idea of the volume of registration :—

Year.	No. of documents registered.	Receipt.	Expenditure.
		Rs.	Rs.
1950	7,597	42,237	17,692
1951	8,400	46,422	22,644
1952	6,996	56,987	16,232
1953	8,053	72,042	18,823
1954	7,359	54,473	19,013
1955	8,188	60,965	19,801
1956	8,707	64,462	20,731

The Registration Officers are also in charge of the Registration of Births, Deaths and Marriages as also of Money-lenders.

Stamps.

The average annual sale-proceeds from stamps come to Rs. 17,16,635 on the basis of the last five years' average and the sale-proceeds for 1955-56 were Rs. 19,91,289.

Income-tax.

An Income-tax Circle for the district of Singhbhum was constituted in 1947, prior to which Singhbhum and Sambalpur used to form one Circle. Income-tax is a Central Department.

The headquarters for Income tax work are at Jamshedpur where four Income-tax Officers are posted. One Appellate Assistant Commissioner of Income-tax is also stationed at Jamshedpur with his jurisdiction over Singhbhum and Sambalpur-Jharsuguda Circles. Due to a very large number of mining and industrial concerns, the district is very important from Income-tax point of view. But of the major industrial establishments, excepting the Indian Copper Corporation, Limited at Ghatsila, all the rest are assessed outside this State. There is, however, a very large number of businessmen and merchants dealing with timber, shellac, *biri*, buildings and mines. The number of assessees and the net demand created for 1952—57 is as follows :—

Year.	No. of assessees.	Net demand created.
		Rs.
1952-53	1,585	17,51,000
1953-54	1,552	13,72,500
1954-55	1,831	19,62,000
1955-56	1,922	17,86,500
1956-57	2,075	18,29,900

Commercial Taxes

For the same reasons mentioned above, the district is also important from the point of view of Commercial Taxes. This Circle for Commercial Taxes was created in 1944, and the head-quarters is at Jamshedpur. There are four gazetted officers of this department in the district including one Superintendent. The following figures for 1952—57 will indicate the volume of collections of various Commercial Taxes :—

	1952-53	1953-54	1954-55	1955-56	1956-57
1	2	3	4	5	6
	Rs.	Rs.	Rs.	Rs.	Rs.
Sales Tax ..	51,08,360	41,33,111	44,95,020	41,80,141	62,64,490
Agriculture Income-tax.	24,543	12,664	9,783	5,241	12,735
Ent. Tax ..	3,28,588	3,33,869	2,99,545	3,45,179	3,82,122
Transport Tax ..	2,40,763	2,90,951	3,20,330	2,88,369	4,15,533
Motor Spirits ..	3,65,685	4,31,972	5,58,119	5,57,963	8,42,233
Electricity ..	3,64,685	5,57,635	6,64,789	6,87,999	8,57,088

Electoral Constituencies.

According to the Delimitation Order no. 26 of 1956, eleven Assembly and two Parliamentary Constituencies were carved out in this district. Some portions of this district had, however, to fall within the Ranchi East Parliamentary Constituency with the Commissioner of Chotanagpur as the Returning Officer ; these portions are the police-stations of Ichagarh, Chandil, Patamda and Golmuri. Two Parliamentary Constituencies named Singhbhum and Jamshedpur are comprised within this district. Three of the Assembly Constituencies, namely, Ghatsila, Chakradharpur and Chandil are double member. For Ghatsila and Chakradharpur, one of the two seats is reserved for Scheduled Tribes' candidates, and for the Chandil Constituency one seat is reserved for Scheduled Castes. Out of the remaining eight Assembly Constituencies, four are reserved for Scheduled Tribes' candidates. These are Potka, Chaibasa, Manjhari and Majhgaon. The remaining four Constituencies, namely, Jamshedpur, Jugsalai, Seraikela and Mano-harpur are open to all classes of persons. Singhbhum Parliamentary Constituency is also reserved for Scheduled Tribes. Since the pressure of population on area is very small, a number of Cons-tituencies fall within more than one subdivision, thus creating the necessity of Deputy Commissioner becoming the Returning Officer

for them. Both the Parliamentary Constituencies and the Assembly Constituencies of Jugsalai, Chakradharpur and Chandil have the Deputy Commissioner as their Returning Officer.

Development Work.

The district has received its due share of National Extension Service and Community Project Programme under the First and the Second Five-Year Plans. The entire district is to be divided into 25 National Extension Service Blocks-*cum*-Anchals by 1961. Out of these 10 National Extension Service Blocks have already come into existence. One of these at Monoharpur is a Centrally Sponsored Special Multipurpose Project for Scheduled Tribes, with an allotment of Rs. 27,00,000 for five years (the allotment for an ordinary National Extension Service Block is Rs. 4,00,000). This is one of the eight Tribal Blocks sanctioned in the State of Bihar during 1957-58.

As elsewhere in the State, the co-operation of the people, on which the success of this programme depends, is secured through the assistance of a District Development Committee at the district headquarters and Block Advisory Committees for all the Blocks. Non-official gentlemen, including Legislators, are members of these Committees. According to Chief Secretary to Government of Bihar's Circular letter no. 6828, dated 15th September, 1955, the District Officer was made responsible for co-ordinating the development work of the other departments of Government as well. To implement these instructions, a Co-ordination Committee, comprising of the district heads of the various departments like Public Works Department, Health, Electricity, etc., exists with the Deputy Commissioner as its President.

Welfare.

Even though there is accent on Scheduled Tribes and Scheduled Castes in all measures, there is a separate department at the district level to execute the schemes specially in the charge of the Welfare Department.

This department in the district came into existence in 1947-48. At present there is a gazetted officer at the district headquarters, designated as District Aboriginal Welfare Officer, who is usually a member of the Bihar Subordinate Civil Service. There is another non-gazetted officer designated as District Harijan Welfare Officer to give similar assistance to the Deputy Commissioner with regard to the welfare schemes particularly for the Harijans. Ultimately, a senior officer is expected to be posted at the district headquarters for both aboriginal and Harijan welfare work with Welfare Inspectors in each National Extension Service Block. At present there are 65 Thana Welfare Officers. This field staff is not necessarily on Thana basis but this is on the basis of work-load.

The most important activity for aboriginal welfare is the grain-*gola* which seeks to reduce indebtedness by making loan of paddy at small interest. One grain-*gola* usually serves about 20 villages. The grain-*gola* scheme has eliminated to a great extent the tyranny of the *mahajans*. There are at present 76 (including 6 run by Panchayats) grain-*golas* in the district. During 1956-57, about 35,000 maunds of paddy was distributed and 11,220 persons were benefited. The next important activity is the construction and maintenance of hostels meant for Adibasi boys and girls. A total number of 28 hostels are at present being run and Government have already constructed buildings for nine of them. The Aboriginal Welfare Department has also sunk a large number of wells, since the problem of drinking water in this district is acute. There is a special measure for settlement of waste lands with aboriginals and during the first Five-Year Plan; 10,087.46 acres had been settled. There are also schemes for rehabilitation of nomadic tribes like Kharias *, construction of hill pathways, subsidy for cottage industries, running of Production-*cum*-Training Centres and supply of poultry for multiplication to the Adibasis. The Adim Jati Seva Mandal with its headquarters at Ranchi, a non-official organisation, has been entrusted with a number of schemes for aboriginal welfare that mostly comprises of running of schools and medical centres. † The District Officers have powers of supervision over these schemes. These schemes are known as "Thakkar Bapa Scheme" after late Shri A. V. Thakkar of the Servants of Indian Society, who had outlined them.

There is a separate department for Harijan welfare. Every year Government sanction fund for the benefit of Scheduled Castes people, schemes of subsidised housing, construction of wells, grain-*golas*, grants-in-aid to Harijan primary Schools, loans and subsidy to individuals for development of cottage industries and subsidy for agricultural purposes. Some of these schemes also cover the Backward Classes. A total amount of about Rs. 70,000 was spent during 1956-57 on such schemes.

Co-operative Movement.

The first co-operative society in Singhbhum district was started at the end of 1912-13. One Credit Unlimited Society with 61 members and a working capital of Rs. 595 was started. The movement has made a steady progress in the district and on 30th June, 1956 there were 335 Multipurpose Co-operative Societies with 6,982 members and a working capital of Rs. 1,83,825. The total number of limited societies of all types other than Multipurpose was 151. There were 25 Credit Societies with unlimited liability. The

---

*Till 1954-55 only 170 Kharia families have been resettled. Each family is given some cultivable land besides homestead and cash subsidy.

†12 Cottage Industry Training-*cum*-Production Centres and 4 Medical Centres have now been started.

limited type of societies includes Credit Societies for mining and factory workers at Gua, Noamundi, Kandra and Jhinkpani, besides Forest Utilisation Society, Fishermen's Society, Weavers' Society, House Building Society, etc. Besides these, there were 41 Tisco Co-operative Societies with 47,251 members and a working capital of Rs. 2,95,91,659. Jamshedpure-Golmuri Central Co-operative Union is the supervising union. There is also one Insurance Co-operative Society named as the Jamshedpur Motor Vehicles Union.

The Chaibasa Central Co-operative Bank is the only Central Bank in the district. It had a working capital of Rs. 1,89,587 on 30th June, 1956. There were 43 individual members of the bank and 231 societies affiliated to it.

The price control system from 1945 to 1953 was worked partially through a number of Co-operative Stores in the district. At one time, there were 17 Primary Consumers' Stores and two Teachers' Co-operative Stores. The number of these two kinds of societies on 30th June, 1956, was 20. The main function of these stores is to supply daily necessities of life to the members as well as to the non-members and particularly to save them from the black marketeers. These stores had a total paid-up share capital of Rs. 21,911 and a reserve and other funds of Rs. 18,845 on 30th June, 1956. On the same date deposits and working capital amounted to Rs. 113 and Rs. 52,379, respectively, and their membership was 1,971. The value of goods sold during 1953—56 was Rs. 2,30,345.

Since the merger of Seraikela and Kharsawan in Singhbhum district, 203 Co-operative Societies have been organised in this subdivision till the 31st May, 1957. There are 187 Multipurpose Societies, 4 *Vikash Mandals*, Credit Society for Kandra Mine Workers, 5 Forest Utilisation Societies, 2 Weavers' Societies, 1 larger-sized Multipurpose Co-operative Society and 3 Co-operative Stores. The total membership of all kinds of societies comes to 5,444. They have raised share capital to the extent of Rs. 25,272. The working capital of the same amounted to Rs. 64,652. Outstanding loans against these societies on 30th June, 1957 amounted to Rs. 39.380. There is also one Co-operative Credit Agricole Depot in this subdivision, although the demand for fertilizers is still low.

Kolhan Superintendent

The administration of the Kolhan and Porahat Government Estates since a long time past has been entrusted to a senior member of the State Civil Service designated as the Kolhan Superintendent. He is under the general control and supervision of the Deputy Commissioner. The appointment to the post of the Kolhan Superintendent is made by Government while the gazetted officers to assist the Kolhan Superintendent are selected by the Deputy Commissioner out of the general cadre of officers posted at headquarters.

The functions of the Kolhan Superintendent are mainly to supervise the collection of rent, implement the various schemes for the improvement of the tenants, settlement of land and the other usual functions of a Revenue Officer in the Khasmahal Department. Traditionally regarded as the sole custodian of the interests of the Adibasis inhabiting the Kolhan area, the Kolhan Superintendent in the past had to arbitrate over matters of purely domestic and private character. Decades back the Kolhan Superintendent used to arbitrate in family disputes, quarrels between husband and wife and even go to the length of awarding compensation to an aggrieved girl against the faithless betrayal by her lover or restoring a truant wife to her husband.

The Kolhan Superintendent also discharged the functions of a Munsif in this non-regulation area and tried civil suits up to the valuation of Rs. 300. Besides these functions, the Kolhan Superintendent also worked as the Manager of the Wards Estate of Anandpur and the Encumbered Estates of Kera, Chainpur, Charai and Murum. Till the abolition of Zamindaris, the Kolhan Superintendent was also incharge of the Khasmahal and Tauzi Departments in an *ex-officio* capacity and discharged a number of duties which have now gone to the Additional Collector.

The Kolhan Superintendent was given an elaborate staff consisting of an Inspector, an Accountant, two Overseers, a Kanungo, several Tahsildars and other subordinate functionaries but the main collection of rent in Kolhan area was done by the permanent time honoured agencies, namely, *mundas*, *mankis* and the *tahsildars*. The administration of the Kolhan area fully followed the old trend of the *manki* and *munda* system. The *munda* was the village headman while the *manki* was the divisional headman having jurisdiction over a number of villages varying from 3 to 25. The *tahsildar* was an agent of the *manki* to assist in collection work. In all there were 75 *mankis* and nearly 900 *mundas* in the Kolhan. They all worked on commission basis, the *munda* getting 16 per cent, the *manki* 10 per cent and the *tahsildar* 2 per cent of the total collection. The *mankis* and *mundas* were appointed by the Deputy Commissioner on the recommendations of the Kolhan Superintendent who sent his recommendations usually after holding a formal election. The appointment of *mankis* and *mundas* was reiterated by a formal *sanad*.

A good deal of attention has been paid for carrying out works of improvement in Kolhan area. Every year a specified sum has been allotted. Prior to the abolition of the Zamindaris the annual sum fixed for the improvement in Kolhan was Rs. 88,000 in round figure. Besides there was a separate annual allotment of Rs. 22,000 called Kolhan Market Fund to be spent on the improvement of the several *hats*. This was a wise directive as the *hats* were not only the clearing house for trade and commerce but also the great

place for social meets, amusements by cook fightings, etc., and the improvement of the *hats* meant the improvement of the people who thronged there on every *hat* day.

As mentioned before, civil suits in the Kolhan area were tried by the Kolhan Superintendent up to the valuation of Rs. 300. The Deputy Commissioner used to try the civil suits for valuation above this amount. Appeals from the decision of the Kolhan Officers laid in the first instance to the Deputy Commissioner and then up to the Commissioner who used to function as the final Court of appeal in such matters. These civil suits were tried in accordance with a set of rules framed by Capt. Wilkinson who was the Agent to the Governor-General when the British took over the administration of Singhbhum district.

The Kolhan Enquiry Committee which had been appointed by the State Government in 1948 to suggest suitable changes in the existing set up of Kolhan administration expressed itself in favour of keeping the area beyond the purview of the Civil Procedure Code at least for some time to come. They thought that the application of the Civil Procedure Code was likely to increase the cost of litigation amongst these relatively backward people and cause them unnecessary hardship. The Committee further recommended that there should be a special legislation enacted for administration of Civil Justice in the Kolhan and the model should be the Santhal Regulations. It was considered that the pecuniary jurisdiction of the Kolhan Superintendent should be raised up to a valuation of Rs. 1,000. A draft copy of such rules was submitted to Government but while they were still under consideration, the Patna High Court, while admitting a revision petition arising out of a Kolhan case, held that under Act II of 1951 (The Code of Civil Procedure Amendment Act, 1951) the Civil Procedure Code should be deemed to apply throughout India. Kolhan not being excepted, it was held that the Kolhan Superintendent or the Deputy Commissioner had no jurisdiction whatsoever to try civil suits under the Wilkinson's Rules.

Till lately there were no police-stations in the Kolhan and the *mankis* and *mundas* used to exercise the powers of a Sub-Inspector and Assistant Sub-Inspector of Police, respectively, concerning matters like apprehension of culprits and prevention and detection of crimes. With the installation of regular police-stations in the area, however, in pursuance of the recommendations of the Kolhan Enquiry Committee, the *mankis* and *mundas* have gradually been divested of these powers. Similarly the establishment of a network of *Gram Panchayats* in the area has given another blow to the already dwindling influence of the *mankis* and *mundas*. The *Gram Panchayat* has a judiciary side vested with criminal and civil powers. The result was that the *mankis* and *mundas* were reduced just prior to the abolition of Zamindari to the status of mere revenue collecting agents.

The administration of the Porahat estate after it escheated to Government in 1934 was running practically on the same lines as that of the Kolhan. The only notable difference between the two lay in the fact that while the settlement of land in the Kolhan was restricted only to the aboriginals, in Porahat area there was no such restriction and every resident tenant of the estate could acquire land within the area. The changes in the administrative set up, particularly after 1947, had their effects on the Kolhan administration as well. There was less of the previous type of paternal administration for the Kolhan area and the Kolhan administration was slowly merging itself with the general land revenue administration. In 1956 the Deputy Commissioner felt that a stage had come when the executive aspect of Kolhan administration had to be separated from its traditional and legal aspect. It was, however, felt that for the latter, the State Government alone were to take a final decision and the proper stage to do this would only be after ascertaining public opinion in a proper manner. The issue is far too big for the district administration as the change over might create a reaction and it is a question of deciding a policy of a wider appeal. The Deputy Commissioner had wisely let the ultimate decision to be taken by the State Government as no decision on the recommendation of the Kolhan Enquiry Committee had yet been taken by the State Government.

Sri L. Dayal, I. A. S., Deputy Commissioner of Singhbhum, on taking over charge of the district in 1956 had felt that while it was necessary to merge the executive side completely with the general revenue administration, the peculiar traditional functions of the Kolhan Superintendent had to be kept intact. For achieving this compromise, he had issued orders in October, 1956, outlining the set up that was to be followed. This order was issued with approval of the Commissioner of Chotanagpur Division and ran as follows :—

"The question of merger of the Kolhan Superintendent's work with the pattern of the general land reforms has been under consideration for some time.

"The three main aspects of the Kolhan administration are (a) handling of civil cases of the area under the Wilkinson's Rule, (b) the system of land settlement and general superintendence over the village revenue system through the hierarchy of the *mundas* and *mankis* and (c) the implementation of the provisions of the Chotanagpur Tenancy Act with a view to prevent the alienation of the lands of the aboriginals.

"These three would sum up the purposes for which the post of Kolhan Superintendent has existed for more than 50 years. The *manki-munda* system exists by tradition. But the system of

trial of civil suits in a summary manner without recourse to Civil Courts, through the agency of the General Administration culminating in the Commissioner, and the effort to preserve the lands of the Adibasis for them against outsiders are rooted in prescribed rules and laws, namely, the Wilkinson's Rule and the Chotanagpur Tenancy Act, respectively. The system of Kolhan administration has sometimes been described as "paternal"; there is a direct touch between the local headman and the Kolhan Superintendent and through the Kolhan Superintendent between the local headman and the Deputy Commissioner himself. The Kolhan Superintendent has always been a very senior officer of Subdivisional Officer's rank. The whole idea is to prevent the Hos from being exploited by (*a*) intermediaries, either bureaucratic or legal, and by (*b*) outsiders and non-Adibasis. The objective has always been to prevent clever and resourceful people trying to break through the integrated communal life of the Hos. Provisions of the Wilkinson's Rule, where the Civil Court and the legal profession are eliminated as far as possible and rough and ready justice administered, the system of *mankis* and *mundas* where settlement of lands is a local affair left to the discretion of the village headman and the provisions of the Chotanagpur Tenancy Act, which forbid the transfer of lands of the Adibasis except for welfare purposes thereby preventing the Adibasis from becoming landless labourers, are all, in my opinion, designed to the same end.

"It is not desirable to change the system unless such a decision is taken by Government. This will amount to a major change in the system of administration over the local people. The Kolhan Enquiry Committee itself, about 7 years ago, recommended that the system be changed only gradually but no decision on it has yet been taken by the State Government. On the other hand in 1953, a clarifying notification was issued excluding the Sadar subdivision from the operation of the Civil Procedure Code.

"But after the Area Notification and Land Reforms, a Land Reforms Deputy Collector has been posted for the Sadar subdivision. It is also necessary to entrust the general revenue functions to the Subdivisional Officer, assisted by his Land Reforms Deputy Collector, so that the Subdivisional Officer can assume responsibility for development work which is closely connected with revenue work.

"I have issued orders separately regarding distribution of work in which I have asked the Land Reforms Deputy Collector, Sadar to assist the Kolhan Superintendent in certain functions.

"The workable system, therefore, till Government take the decision to abolish the Kolhan administration, is described as follows. This should be implemented now.

"The functions peculiar to the Kolhan [administration should be separated from those common to the general land reforms administration. The Kolhan Superintendent should continue to perform the functions enjoined upon him by the older Kolhan system (described by me above) till Government decide to wipe away the Kolhan system. I do not anticipate such a change at least for the next one year. Such peculiar functions of the Kolhan are enumerated in the enclosed statement.* The second category will comprise of general revenue functions like responsibility for rent collection, field *bujharat*, compensation, assessment of fair rent, Zamindari improvement and disciplinary control over the Circle Inspectors and the Karamcharis. For these the responsibility should rest squarely on the Subdivisional Officer, as in any other subdivision, and he should be assisted by the Land Reforms Deputy Collector towards this. Attached to these duties are items like scarcity relief, loans, irrigation and all other revenue matters. These also should be handled by the Subdivisional Officer with the assistance of the Land Reforms Deputy Collector.

"But in order to give to the Land Reforms Deputy Collector the advantage of being connected with the peculiar revenue system of his jurisdiction too, as also to give relief to the Kolhan Superintendent, who is the District Elections Officer as well, the Land Reforms Deputy Collector should also assist the Kolhan Superintendent as a subordinate officer in handling the items enumerated in the statement enclosed.* For these purposes, he may be known as Kolhan Second Officer. He will have one Bench Clerk for this purpose which the Kolhan Second Officer was having previously.

"The Kolhan bungalows, gardens and roads are peculiar feature of the Kolhan administration but, it seems, this year the funds have been provided from the general Land Reforms head. The Kolhan Superintendent should continue to be in charge of the Kolhan bungalows, gardens and roads.

"The Kolhan Accountant and the Kolhan Overseer will work under the Kolhan Superintendent. But the Kolhan Overseer's services should also be utilised in other technical work in connection with execution of schemes in the Kolhan area.

"Subdivisional Officer, Sadar, should send proposals for new Minor Irrigation and Zamindari Improvement schemes through the Kolhan Superintendent so that he is aware of such schemes in the Kolhan area."*

Central Excise.

The old Department of Central Excise and Salt was rejuvenated with the imposition of excise duty on tobacco and sugar in 1943.

*The enclosures referred to in the circular are not reproduced. The directive of Mr. L. Dayal, Deputy Commissioner, has been continuing till now (1958). [P. C. R. C.].

With the independence of the country, excise duty on salt was abolished and to meet the deficiency excise duty on other commodities was imposed.

Central Excise is a subject under the Government of India. The civil district of Singhbhum for Central Excise purposes is placed under the Superintendent of Central Excise of Ranchi Circle with his headquarters at Ranchi. The Superintendent works under the administrative control of the Assistant Collector of Central Excise, Patna Division and under the Collector of Central Excise for Bihar with his headquarters at Dinapur. At Jamshedpur there is a Deputy Superintendent of Central Excise with some subordinate staff. Chakradharpur, which is an important centre for *biri* manufacturing work, has two ranges each under an Inspector, besides the Range Officer, Chaibasa, who is entrusted to look after assessment and control of licensees. Chaibasa Cement Works is located near Chaibasa and there are Inspectors of Central Excise stationed there for assessment and clearance of cement. The statistics of realisation of the revenue under different excise commodities are as follows :—

(1) *Steel Ingots.*—The most important excisable commodity in Singhbhum district is steel ingots on which excise duty was levied under Iron and Steel Duties Act, 1934. But since 1934 the control and assessment of steel ingots was being looked after by the Department of Metallurgy, Government of India. The factory was put under supervision of Central Excise Department in 1954, and the production and revenue realised as duty on steel ingots are as under :—

Year.	Production.	Revenue.
	Tons.	Rs.
1954-55	10,49,601	41,98,404
1955-56	10,66,507	42,66,028
1956-57 ..	10,75,126	43,00,507
1957-58 .. .. (up to December.)	8,25,513	2,84,26,744

It may be mentioned that duty on steel ingots was raised from Rs. 4 per ton to Rs. 40 per ton from last May and the factory is having a two-million ton expansion programme. As such the total annual Central Excise duty expectation for the commodity is over Rs. 4 crores for the year 1958-59.

The Tata Iron and Steel Factory at Jamshedpur is the most important steel producing factory and a small quantity of steel is also produced by Telco, which is also situated at Jamshedpur. As under the expansion programme, Steel Melting Shop no. III of Tisco was down, the Electric Furnaces lying fallow in Telco were harnessed into production and the ingots produced were used to

feed the mills attached to S. M. S. III of Tisco. The Foundry went into production in October, 1956 and is now producing steel ingots to the tune of 1,500 tons per month, yielding a revenue of Rs. 65,000 per month approximately.

(2) *Cement.*—The next most important excisable commodity in Singhbhum district is cement which came under excise purview by the Finance Bill, 1954. The cement factory is situated at Jhinkpani near Chaibasa. The production and revenue figures are as under :—

Year.			Production.	Revenue.
			Tons.	Rs.
1954-55	..	..	2,08,794	10,62,057
1955-56	..	..	1,38,281	6,75,267
1956-57	..	..	2,16,184	10,81,507
1957-58 (up to December)	..	..	1,65,440	26,05,747

It may be mentioned that the duty on cement was raised from Rs. 5 per ton to Rs. 20 per ton from May, 1957, and the factory is also under expansion programme. Annual revenue is now expected to be over Rs. 50 lakhs.

(3) Tobacco may be considered to be the third important excisable commodity in Singhbhum district. Chakradharpur is one of the most important *biri* manufacturing centres in Bihar. The figures of duty are given hereunder:—

Year.			Production.	Revenue.
			Tons.	Rs.
1955-56	..	..	..	16,71,094
1956-57	..	..	..	15,24,454
1957-58 (up to December)	..	..	..	17,59,980

The Central Excise Duty expected under tobacco for Singhbhum district is to be taken as approximately Rs. 20 lakhs per year henceforth.

(4) *Motor Spirit.*—The revenue realised as duty under this item is furnished below since 1954 :—

Year.			Production.	Revenue.
			Glls.	Rs.
1954-55	..	..	7,58,113	7,06,181
1955-56	..	..	4,68,861	4,06,570
1956-57	..	..	3,05,122	2,71,688
1957-58 (up to December)	..	..	5,54,662	4,99,809

(5) *Paints and Varnishes.*—Paints and Varnishes came under excise control since 1955 only and the production and realisation figures are given below :—

Year.	Production.	Revenue. Rs.
1955-56	1,160 Cwt. 2,295 Glls.	15,365
1956-57	2,242 Cwt.	13,799
1957-58 .. .. (up to December)	1,960 Cwt.	9,839

(6) *Vegetable Non-essential Oils.*—This commodity was brought under excise purview only from March, 1956. The Revenue position for two years is furnished below :—

Year.	Production. Tons.	Revenue. Rs.
1956-57	410.603	21,243
1957-58 .. .. (up to December)	187.440	11,833

(7) *Soap.*—Soap also came under excise control in March, 1956. But there are no large soap factories in Singhbhum district and their productions are within the exempted excisable limit.

EMPLOYMENT EXCHANGE.

There are two Employment Exchanges in this district—a Sub-Regional Employment Exchange at Jamshedpur since 1945 and a District Employment Exchange at Chaibasa since 1949. The former covers the Dhalbhum subdivision and the latter the other two subdivisions. For purposes of administration however, the Sub-Regional Employment Exchange, Jamshedpur, covers Ranchi and Singhbhum districts and has, therefore, administrative control over the District Employment Exchanges at Chaibasa and Ranch.

The administration of the Employment Exchange Organisation which was formerly under the Central Government was transferred to the State Government from 1st November, 1956. The Employment Exchanges in the State are now controlled by the Labour Department, Government of Bihar, through the State Director, National Employment Service, Bihar.

Almost all the organised industries, as also the mining establishments in this district, have expansioned development programmes, thereby increasing the employment avenues in this area. Some of the industrial establishments have, however, introduced a programme of rationalisation. This has to an appreciable extent off-set any large scale increase in the standard labour force. No retrenchment due to rationalisation is, however, likely to occur in

this area. The expansion development programmes have, however, yielded large scale employment opportunities during the construction periods.

The Railways have also undertaken doubling of many of their existing railway tracks, as also opening of new railway lines in order to cope with the increase in traffic due to the industrial developments in Singhbhum district and adjoining areas. The State Government have also been undertaking development programmes in this area such as Community Development Blocks, expansion of primary education programme, settlement survey of land. All this has continued to afford considerable employment opportunities in this area. Mention may also be made of the *bidi* industry concentrated in Chakradharpur area which affords employment to about thirty thousand workers.

The employment potentialities in this district are very great and with a planned development programme by the industries and the mining establishments, a gradually developing level of employment is expected to be maintained in this area.

The services offered by the Employment Exchanges are free and voluntary. By its service standards, as also due to the co-operation of the employees and the workers' organisations, the Employment Exchanges in this district, have, however, now gradually developed as the normal channel of recruitment, for most of the industrial and mining establishments in this area. In addition, the Central Government establishments recruit their personnel through the Exchanges. A proposal for canalising recruitment in the State Government establishments and in the local bodies is under the active consideration of the Government of Bihar.

Some important Exchange statistics of the two Employment Exchanges in this district are given below—

Year.	Registration.	Vacancies notified.				Vacancies filled.			
		Central Government.	State Government.	Other employers.	Total.	Central Government.	State Government.	Other employers.	Total.
1	2	3	4	5	6	7	8	9	10
1953	17,334	673	284	3,284	4,241	540	184	2,392	3,116
1954	23,586	827	880	2,018	3,725	711	479	1,702	2,892
1955	21,389	583	1,034	1,936	3.543	527	869	1,368	2,764
1956	62,084	398	1,042	5,706	7,146	125	610	4,089	4,824
1957	53,839	584	660	8,745	9,989	391	326	8,045	8,762

So far the Employment Exchanges have been undertaking only "Placement work", i.e., assisting applicant public in getting suitable jobs and assisting the employers in finding suitable persons. During the Second Five-Year Plan, the activities of the Employment service are being extended in other directions also. The two important programmes affecting the Employment Exchanges in Singhbhum district are—

(*a*) Collection of Employment Market Information; and

(*b*) Youth Employment Service.

The former deals with collecting information on a continuous basis and making studies about levels of employment and unemployment; shortage categories, etc., and making the same available for planning purposes. This programme is being started by the middle of 1958. The second programme is intended for providing vocational guidance to the youth, entering the employment market and employment counselling, for training and re-training to adults. This second programme is expected to be started at the Sub-Regional Employment Exchange, Jamshedpur during the second plan period.

The demand for technical personnel both supervisory and tradesmen is very great in this district, more particularly at Jamshedpur. Very often recourse has to be taken to the "Clearing Machinery" of the National Employment Service, for securing candidates for the technical trades from outside places. A special characteristic of the labour force at Jamshedpur is that this is drawn from all parts of the country.

As in other districts of Bihar, the Exchanges in the Singhbhum district also have a surplus of clerical categories on their registers.

WELFARE DEPARTMENT.

There is a Welfare Department in the district directly under the Welfare Department of the State Government. This Department is concerned in implementing the rehabilitation and welfare measures for the Adibasis in the district, some details of which have been given elsewhere. The Department has actively taken up the question of re-settlement of the Kharias and other allied tribes and about 170 families have been resettled in the year 1954-55. The Kharias are a wandering tribe and with difficulty eke out an existence. Each family has been given about 2 acres of cultivable land besides some homestead land and cash subsidy, bullocks, manures, seeds, etc., to rehabilitate themselves in a settled manner. 12 Cottage Industries-Training-*cum*-Production Centres are now working and imparting training in crafts, namely, carpentry, basket making, rope making and bee keeping. Some medical centres have now been working at Chandanpur, Seraikela and

Holudpani. More hostels are being built for the residential accommodation of the Scheduled Tribe students of the district. There are now 10 constructions complete at Chaibasa, Seraikela, Purnea, Manoharpur, Chittimiti, Asura, Kharsawan, Chakradharpur and Manpur. Hostels at 21 other places are running in hired buildings. Till 1954-55 there were 4 grain-*golas* in the district. Since 1955-56 more grain-*golas* have been opened.

The Department also arrange loans for members of the Scheduled Tribes for development of Cottage Industries. Stipends are given to the Scheduled Tribe students both in schools and colleges. For 1957-58 there was a provision for Rs. 1,27,665 under this head. In 1956-57, 563 wells were reported to have been constructed.

State (Rajya) Transport Service.

As mentioned elsewhere the nationalisation of transport service in the city of Jamshedpur was made effective from the 14th August, 1952. On that date the State (Rajya) Transport Department took over the entire fleet and equipment of the private bus services in Jamshedpur and began to ply their services. By the 1st February, 1954 two rural routes, viz., Jamshedpur-Chaibasa and Jamshedpur-Musabani were added. From the 1st January, 1958 the State (Rajya) Transport Services are also plying their buses on Jamshedpur-Aderdih route. By the end of 1957-58 the routes operated by the State (Rajya) Transport in the district of Singhbhum totalled 21.

Excepting the areas of Jamshedpur town, Jamshedpur-Chaibasa, Jamshedpur-Musabani and Seraikela subdivisional routes, the private bus services have been allowed to ply in the other routes. The State (Rajya) Transport also run mail bus and school buses in the town of Jamshedpur.

The total route-mileage in the district at the end of 1957-58 was 306.2 miles including the urban route-mileage of Jamshedpur town of 40.1.

The present fleet consist of 100 vehicles. There are two depots at Jamshedpur and Seraikela respectively. The fare structure of the rural routes as well as the Jamshedpur town services is on mile and stage basis; the Jamshedpur-Chaibasa and Jamshedpur-Musabani having a slightly lesser charge than those of Seraikela-Jamshedpur-Aderdih services: 6 pies per mile for the former and 7½ pies per mile for the latter on four-mile stage basis. The State (Rajya) Transport Department in the Singbhhum district are placed under the charge of a Divisional Manager who

is assisted by different sectional heads. The receipt from 1954-55 to 1957-58 is as follows :—

Receipt.

Year.	Jamshedpur Depot.	Seraikela Depot.	Total.
	Rs. as. p.	Rs. as. p.	Rs. as. p.
1954-55	12,73,745 11 6	..	12,73,745 11 6
1955-56	13,70,248 9 9	1,04,000 0 0	14,74,248 9 9
1956-57	16,23,177 11 6	1,10,000 0 0	17,33,177 11 6
1957-58	18,39,725 0 0	1,29,621 0 0	19,69,346 0 0

COMMUNITY DEVELOPMENT.

The National Extension Service Scheme aims at initiating a process of transformation of social and economic life of the villages. It includes not only extension work in the field of agriculture, and animal husbandry but also such items as social education, organisation and development of co-operatives and panchayats, and measures for improvement of public health and communication. As it has been observed decentralisation and democratisation are the two main objectives of this scheme. The Department has become an integral part of the district administration and has a great importance so far as the development and welfare side of the district is concerned.

The staff provided in a National Extension Service Block usually consists of a Block Development Officer, Extension Supervisors for Agriculture, Animal Husbandry and Co-operative-*cum*-Panchayat Work. Social Education Organisers, Overseer with public health plant and Village Level Workers.

A number of departments which usually had their offices at the district headquarters have thus been brought to the very villages as it were and this is a great achievement of the National Extension Service organisation. Previously the villages used to be seldom visited by the itinerary staff and more time was spent at the headquarters' work.

The Centre is vitally interested in this work and there is a separate Ministry for this. The programmes of the different departments at the districts in Bihar have to be co-ordinated and, as far as possible, integrated. It has, accordingly, been decided to transfer the administrative control over the N. E. S. organisation to the Development Commissioner. The Development Commissioner has been given the help of Assistant Development Commissioner at each Divisional Headquarters. He will be responsible

for the co-ordination and integration of the programmes chalked out for implementation by the different departments concerned in the National Extension Service Block. N. E. S. Block, after it has functioned as such for a stipulated period, is expected to be upgraded into a Community Development Block for intensive development, on the lines of Community Project for a period of three years and thereafter to revert to the N. E. S. pattern. The pattern of administrative control, etc., in respect of an upgraded C. D. Block and again on relapse to N. E. S. pattern after the period of intensive development will be exactly the same as that of an N. E. S. Block.

The District Magistrate or the Deputy Commissioner plays an important role in the picture as it is for him to give the necessary guidance and help to the officers associated with the Project. As a matter of fact, in the present set up, the District Magistrates are expected to take much more interest in such development projects than in the day-to-day administration of the districts. The District Magistrates have been specially enjoined by the State to be very particular about this duty and to be fully associated with the non-official elements in the districts to implement the Project.

The district of Singhbhum with its special characteristics of a vast undeveloped area, a large rural population predominantly Adibasis with a poor incidence of literacy attracted early the attention of the State for this type of work. The first N. E. S. Block was opened in 1954 at Kharsawan. Since then till December, 1957 altogether 10 Community Development or National Extension Service Blocks have been sponsored and they are functioning in the following areas : (1) Adityapur, (2) Kuchai, (3) Seraikela, (4) Baharagora, (5) Noamundi, (6) Patamda, (7) Kharsawan, (8) Manjhari, (9) Musabani and (10) Manoharpur.

These Blocks cover an area of 1,874 square miles with 1,906 villages and 5,64,000 persons. The population covers 52,302 families.

In these Blocks an integrated programme for furthering the cause of agriculture, animal husbandry, irrigation, waste-land reclamation, social education, public health and rural sanitation, arts, crafts and industries have been pursued. There has been an encouragement for the improvement of agriculture by the distribution of improved seeds, distribution of better type of implements, practical demonstration, planting of trees and encouragement to the growing of vegetables. As the cattle and poultry needed improvement, a series of breeding centres have been opened with a supply of pedigree animals and birds. A number of *pucca* wells have been constructed along with *ahars* and *pynes* with a view to bring more area under irrigation.

One of the main ideas behind this development work is to arouse the response of the rural population and the incidence of success of a project depends more on the popular response received. The experts think that the response from the public by way of popular contribution is not inconsiderable. It is, however, expected that there will be more of a popular response with the passage of time and a futher extension of the work. The untapped human resources will be gradually tapped by these projects and this district will play a prominent part in the general planning for India.

The Deputy Commissioner has a vital role to play in implementing this programme. He has to have imagination and initiative so that the development and welfare schemes are such as would meet the needs of the people and to have an overall supervision to ensure that the targets are reached in time. Any difficulties in the execution of schemes are usually referred to the Deputy Commissioner and it is for him to secure proper co-ordination and to remove such difficulties. A high incidence of people's co-operation is not always easy to achieve and the Deputy Commissioner's personal equation in securing the co-operation is vital. The District Officers have also been given powers of administrative and disciplinary control over the development officers. The District Officers have been relieved of a part of their responsibility in the matter of administration of criminal justice so that they could have the necessary time for looking after the development and welfare duties. The success of such schemes depends to a very great extent on the personal zeal of the officers entrusted with this work.

CHAPTER XIX.

DIRECTORY.

Adityapur.—This village was carved out in the year 1918 out of the villages of Dindli and Raidih, etc., for the purpose of establishing a township. It is close to Tatanagar from which it is separated only by the river Kharkai. Already over 1,000 workers of different factories at Tata have settled down at Adityapur on temporary basis. There is a plan before the State Government for establishing a township at this place. This is connected with Seraikela by an all-weather road measuring 25 miles. There is a proposal to construct a bridge on the river Kharkai, so that Jamshedpur is made accessible in all weather.

Amda.—This is a railway station on the Howrah-Nagpur main line of the South Eastern Railway. The name of the railway station was changed to Rajkharsawan. It is a junction for Kharsawan-Gua line and the main line. The station has gained importance on account of export of timber and kyanite stones. The best kyanite of the world is found in the Kharsawan area and this is the most important station for exporting these stones. It is at 4½ miles from Kharsawan town and is connected by bus service.

Anandpur.—A village of the Manoharpur police-station, situated in the west of the district, with an area of 1,614 acres. The population of the village according to 1951 census was 982 with 490 males and 492 females and the number of occupied houses was 212. There is a basic school and the number of literates recorded in 1951 was 140.

BAGAKUDAR LAKE/JUBILEE PARK.

A circular lake known as the Bagakudar Lake in the vicinity of the court buildings at Jamshedpur was a beauty spot. In 1937, a beginning was made to develop a central park under the guidance of Mr. S. Percy Lancaster. The project was resumed in August, 1955 with the Company's jubilee in mind and its layout entrusted to Mr. G. H. Krumbiegel, and Mr. B. S. Nirody, who had to their credit the famous parks of Mysore State and the Moghul gardens of Rashtrapati Bhawan, New Delhi.

The grounds of the park cover approximately an area of 200 acres with the vista of Dalma Hill to the north and the panorama of the Steel Works to the south. In about two years a vast stretch of unpromising terrain was converted into one of the best parks in India. The park has been designed around a central axis running from the Founder's statue at its highest point through the Moghul Garden, the Foliage Group and the Rose Garden,

to the little island in the centre of the Jubilee lake. There are two children's gardens in the park provided with swings and equipments for play and exercise. There is a children's 80-foot square maze made of a low hedge. The Jubilee lake with an area of 40 acres has been dredged and deepened for boating and for forming an island in the centre. There is a boat house and a cafeteria. There is a Rock Garden and a Miniature Golf Course of 9 holes.

Some of the introduced species are *Juniperus chinensis, Polyalthia Longifolia var pendula, Nymphaea, Arundo donax, Callistemon, Gerberas,* various species of *cacti* including *Cereus, Amaranthus,* etc.

Baharagora.—A village in Dhalbhum, situated 2 miles east of the river Subarnarekha, 21 miles south of Chakulia, and 30 miles south-west of Ghatsila. It contains a police-station, post office, high school, middle school, primary school and *gram panchayat.* According to the census of 1951 Baharagora extends over an area of 384 acres with a population of 420, consisting of 208 males and 212 females. The number of occupied houses was 69 and literates 105. The incidence of literacy is higher than in any of the villages of the district. A National Extension Service Block is also functioning in the village.

A market is held here every Thursday at which rice, *sabai* grass, oil-seeds and hides are largely sold. Near the village are some brick buildings believed to be the remains of indigo factories. At Kalsimohan, 2 miles from Baharagora, there is a spring from which water is said to issue only during the *Baruni* festival; a fair held at the time of this festival lasts for a fortnight. At Khanamonda, 2 miles from Baharagora, large melting pots can be seen, which are believed to be relics of an old iron or copper smelting industry.

Bamiaburu.—The Bamiaburu Hill is one of the principal peaks of Singhbhum and its height is 2,135 feet. It is situated at a distance of 2 miles south of Kutipur and 38 miles south-west of Chaibasa. It is a beauty spot. A very good forest rest bungalow is also situated here. Wild animals including elephants are available in the dense forest of Bamiaburu. Man-eaters frequently visit the area. A big game shooting zone.

Bandgaon.—It was an under-tenure of the Porahat estate situated in the extreme north-west of the district on the 48th mile of Chaibasa-Ranchi Road, with an area of 25 square miles. Tradition relates that it was originally a *pir* or group of villages, called Pirarni, which came into possession of the Porahat family through a marriage with the Jherria or Sonpur family, to whom the *mundas* owed allegiance. Subsequently Raja Harihar Singh of Porahat

is said to have conferred it as a rent-free service tenure on one Jagmohan Singh of the Khatanga family. In 1857 it was confiscated with the rest of the Porahat estate in consequence of the rebellion of Raja Arjun Singh, but in 1861 Sukhlal Singh, the son of its former holder, received a farm of it for 20 years from 1859 to 1878 by which he was allowed to appropriate two-thirds of the net revenue of Rs. 1,093 after payment of *mankis* and *mundas*. By 1875 he had become hopelessly insolvent and the estate was attached, remaining under attachment till 1891. In the meantime, in 1880 Government decided that Bandgaon was a permanent tenure, and acknowledged Sukhlal Singh as tenure-holder. In consequence of this decision, the estate was in 1881 resettled and separated from the Porahat estate, and the police services were commuted for a payment of 5 per cent of the gross rental of the estate. The then tenure-holder Babu Jang Bahadur Singh was son of Jagmohan Singh. In 1891 Government decided that Bandgaon was an under-tenure subject to a fixed rent permanently fixed at one-third of the assets, the police contribution and the dak cess; the dak cess was subsequently abolished. Besides paying the Zamindar of Porahat one-third of the net rental of the 37 villages included in the under-tenure, the holder of the tenure was liable to pay him one-third of any income from its forests. He had no right to minerals. This tenure has since vested in Government under the Bihar Land Reforms Act. A big weekly *hat* attended by about 1,500 people is held.

The village contains an inspection bungalow of the Public Works Department, a Welfare Centre with a grain-*gola*, a District Board dispensary and a police outpost. There is also a District Board lower primary school and a middle school, called St. Michael's middle school which is maintained by the Roman Catholic Mission. Besides the Roman Catholic Mission at Bandgaon, there are two Missions in the vicinity of Bandgaon, namely, Society for the Propagation of Gospel Mission at Meramgutu and German Lutheran Mission at Takad.

Banksai.—Banksai was a *pir* or division containing 29 villages when Seraikela was a State. It was held by Babu Raghunath Singh, a descendant of Bikram Singh, the first Chief of Seraikela State, who gave a grant of it to his fifth son, Birbar Singh, for his maintenance.

Benusagar.—A village situated 7 miles south from Majhgaon by road in the extreme south-east of the Kolhan on the border of Singhbhum and Mayurbhanj. It is so called after a tank to the north of the village, which is partially silted up and over grown with weeds. There is a tiny island in the middle, which is covered with shrubs, and at the south-east corner are some low mounds of bricks marking the ruins of several old temples and some well

carved images half buried in the ground. Mr. Beglar ascribes the origin of the temples to the seventh century A. D. and writes as follows about the sculpture :—

"The sculptures that exist are entirely Brahmanical with two exceptions. The exceptions are a small naked figure, which, from its evident resemblance to Jaina figures, I take to be Jaina; and a seated figure, with the hands in the attitude of teaching, resembling figures of Buddha and like many of them, with his head covered with little curls. That this figure is Buddhist, its general resemblance to figures of Buddha in Magadh leads me to believe; still there is nothing impossible in its being Jaina. With these two exceptions, all the figures are Brahmanical, and almost exclusively Saivic, Ganesh, Kali, Mahisasuri Devi, etc., fragments of these being frequent. A remarkable piece of sculpture, of curious and excellent execution and very spirited design, represents the forepart of an elephant elaborately ornamented. The elephant is kneeling, and evidently formed either a pedestal of a figure or projected from the plinth near the entrance of someone of the numerous temples, in a manner similar to the projecting figures of elephants in other parts of India. The excellence of execution and design of this piece of sculpture entitles it to a place in any museum".

Since Beglar wrote there has been deterioration of the sculpture owing to want of proper maintenance.

According to tradition, the tank was excavated and a fort built here by Raja Benu, son of Raja Kesna of Kesnagarh. Colonel Tickell left the following account of the place in 1840:

"In Aula *pir*, to the far south, a few Kols of the poorest kind have built a wretched, straggling hamlet near the banks of what once was a truly magnificent tank. It is called Benusagar, and is said to have been built by one Raja Benu, who fled from the place owing to the incursions of the Mahrattas. This was probably during the days of the celebrated Murari Rao; for judging by the trees which now luxuriate amidst the buildings, the place must have been deserted and in ruins full 200 years ago. The tank, which I paced as well as the jungle allowed me, is about 600 yards square. On the east bank are the remains of a handsome stone *ghat*; the west side may be similar, but was inaccessible by reason of thickets. On the summit of the ample *bandh*, or embankment, surrounding the water, lie stones richly carved;

it is probable that they once constituted small temples ranged around. In the centre of the tank is an island crowned by a temple, now almost a shapeless mass. On the south-east corner of the tank are the debris of a *garhi* or small fort, which appears to have been a parallelogram of about 300 by 150 yards, enclosed by a massy wall with towers at the corners. In the centre are two sunken platforms, with stone steps descending into them, in which lie idols in all stages of decay; some of these were buried many feet under a loose reddish soil having the appearance of decayed bark. Three of the best preserved of these I took away, with the help of some Nagpur Dhangars, not one of the people of the country daring to touch them. About 300 yards to the south of the *garhi* is another mound of hillock of broken bricks, which I was told was the office of the Raja. To the west of this, and all along the bank of the tank, the plain, now covered with jungle-grass, and here and there cultivated with *go ra dhan* or highland rice by the Kols, is scattered with bricks, showing that a substantial town or bazar must have existed here."

The village contains a Kolhan estate inspection bungalow on a hillock in the midst of small jungle. It is just on the border of Orissa.

A *mela* is held at the village Benusagar, which is about 50 miles south from Chaibasa during the month of *Aghan* every year, called as "*Kartik Purnima Parab*". The *mela* continues for six to seven days. About two to three thousand people assemble there. During the *mela, kirtan* and Ho dance are held. Shopkeepers of different varieties gather and they mainly deal in cloth, sweetmeat, tea, earthen pots, etc.

Bharbharia.—It is a village in Kolhan Government estate 28 miles south-east of Chaibasa by the road *via* Kokcho and Kathbhari and 22 miles by the road *via* Kokcho, Tatanagar and Chitimiti. The population of the village is about 2,000 and it is mainly inhabited by Hos, Tantis and Santhals. This place is only seven miles off from the Orissa border. The village contains a Kolhan Government estate inspection bungalow, a middle school, a *gram panchayat* with a *gram katchery* and a small library. Recently a police-station, known as Manjhari police-station, has also been opened here. Rice, paddy, oil-seeds, cocoons, fowls, fruits and fuel are amongst the important things that are sold here. The Kolhan Officers also hold their camp Courts in the inspection bungalow on *hat* days. The National Extension Service Block Office has recently been opened in Bharbharia. The permanent block buildings are to be constructed at Tanto, two miles away from Bharbharia. There is a dispensary at Tanto.

A *mela* is held here on the occasion of *Dashara* festival and lasts for about three days. Both Adibasis and non-Adibasis of different villages assemble in the *mela*, their number being about 10 to 15 thousands. People from Mayurbhanj district (Orissa) also come to this *mela*.

Binda Mela at Ghatsila.—This *mela* is held in the month of Aswin (October) every year at Ghatsila proper for 15 days. This *mela* was initiated from time immemorial by the forefathers of the Raja of former Dhalbhum estate. The festival was described as follows by Colonel Dalton :—"At the shrine of this goddess (Rankini) a very cruel scene was enacted every year till 1865, when with the concurrence of the zamindar, it was put a stop to. It was called the *Binda Parab*. At this *parab* two male buffaloes are driven into a small enclosure, and on a raised stage, adjoining and overlooking it, the Raja and the suit take up their position. After some ceremonies the Raja and his *purohit*, or family priest, discharge arrows at the buffaloes; others follow their example and the tormented and the enraged beasts fall to and gore each other, whilst arrow after arrow is discharged. When the animals are past doing very much mischief, the people rush in and hack at them with battle-axes till they are dead".

Utensils, sweetmeats, ornaments, etc., are sold in this *mela* by petty shopkeepers. It is a very popular *mela* particularly for the Santhals.

It is popularly believed that human sacrifice used to be offered to Rankini Devi which was stopped near about 1856.*

Bingtopang.—A *mela* is held in this village every year during the *Dashara* festival. The *mela* lasts for about a week. About two to three thousand people assemble in the *mela* from different villages. The village lies within the Jhinkpani police-station. There is a lower primary school.

Chaibasa.—The headquarters of the district of Singhbhum, situated in 22°33′ N. and 85°49′ E., 16 miles south-east of Chakradharpur and 13 miles south of Rajkharsawan on the South-Eastern Railway. It is connected with Chakradharpur by a good road coming from Ranchi winding through ranges of hills. The town has a municipality with an area of one square mile and has a population of 16,474, according to the census of 1951. The population consists of 8,877 males and 7,597 females. The town contains the Criminal and Civil Courts and other Government offices, jail, two police-stations (one for the town and the other for the mufassil), a post and telegraph office, telephone exchange, four high schools including one girls' high school, a Government hospital, a dak bungalow, a Public Works Department inspection bungalow, circuit house, three churches and a cemetery for the Christians.

*Please see Singhbhum old Records for further investigation (P. C. R. C.).

There is a railway station with waiting rooms and a rest house. Recently a college has been started. A very big weekly *hat* is held on each Tuesday where about 6,000 people assemble. Cattle are also sold here.

Chaibasa is situated on a rocky rising ground overlooking the right bank of the river Roro and commands picturesque hill scenery. The natural drainage is good, and even after heavy rain the surface water passes off quickly north and west to the river Roro. The water-supply is derived from the river and from wells and tanks, of which the most important are the Jubilee, Madhu, Siba, Bandtoli, Rani and Dhobi tanks. The climate is healthy but hot, and we find Colonel Tickell, writing in 1840, three years after Chaibasa was selected as the headquarters of the Kolhan, complaining of the choice. "The station of Chyebassa, which was unfortunately selected hurriedly and without sufficient examination and comparison with surrounding spots, is situated on the barren, gravelly plain, interspersed with brushwood, and near piles of bare rocks. A mile only to the south-east at the village of Tambore, the country rises in undulating meadows, beautiful in appearance as an English park, and infinitely cooler than Chyebassa. These advantages informing the cantonment were either overlooked, or thought of less note than the nearer vicinity of water, Chyebassa being on the banks of the Roro." Other writers formed an equally unfavourable opinion of the place. Mr. Ricketts, for instance, wrote in 1854 :—"There is everything at Chaibasa to make a person wish to leave it, while it has not a single attraction". Again Dr. Ball who visited it in 1868, wrote :—"Those officers who have mastered the Ho language, and have become intimate with the people, like this station; but with the executive services of Bengal generally it is regarded much in the light of a penal settlement."

There are three Christian Missions at Chaibasa, viz., the Roman Catholic, Gosner Evangelical Lutheran, and Society for the Propagation of Gospel Missions. All these have been running schools for boys and girls. There was an agency of Tea Districts Labour Association for recruitment of coolies for the tea gardens of West Bengal and Assam. This has since been abolished. The rearing of cocoons on *asan* trees is a popular pastime here. There is an office of a Supervisor of Government Tusser Seed Supply and Research Station to encourage the tusser industry in the district. The Animal Husbandry Department has opened a Poultry Development Centre at Chaibasa. The Welfare Department has opened two hostels for aboriginal boys and girls, namely, Krishna Ballav Chhatrabas and Adibasi Kanya Chhatrabas. There is a technical institute at Chaibasa. It is now being held in a rented house. There is also an agricultural school.

The usual conveyance by which Chaibasa is reached from Chakradharpur and Jamshedpur are buses and taxis, although

the places are connected by rail as well. Taxis and rickshaws on hire are available in the town.

At Chaibasa there are two clubs, viz., the Chaibasa Club and the Town Club, besides four libraries, the State Library, Rammohan Roy Library, the Ganesh Library and Urdu Library. The clubs have got small libraries attached to them. The local town hall, known as Pillai Town Hall, takes its name from a former Deputy Commissioner, Mr. V. K. B. Pillai, I. C. S. There is a *gowshala* at Chaibasa which supplies milk, but the output is very inadequate for the local needs.

Several theories have been put forward regarding the origin of the name of Chaibasa, e. g., that it is the place of rest, the place of shade, and the abode of thieves. It is also said that the town is so called after one Chai, its first *munda* or headman.

Chainpur.—Chainpur was a tenure of the Porahat estate, originally held by one Ramchandra Mahapatra, who had to render military service to the Raja of Porahat. It paid from 1840 to 1857 a quit-rent of Rs. 90-8, estimated to be one-third of the gross income. As a reward for loyalty during the revolt of 1857, Government directed that this quit-rent should be fixed in perpetuity as the rental of the tenure. With the passing of the Land Reforms Act the tenure has vested in the State.

Chakradharpur.—A town situated on the left bank of the river Sanjai 16 miles north-west of Chaibasa. The place is situated in a wide valley flanked by ranges of hills on the north and south. Its population, according to the census of 1951, is 19,948, of whom 10,306 are males and 9,642 are females.

It contains a police-station, a dak bungalow, a District Board inspection bungalow, a Public Works Department inspection bungalow, a Kolhan Government estate inspection bungalow, a forest rest house, and municipality. There are two churches, three high schools, one middle school for girls, known as Rasal Manjheri Girls' Middle School, and several other middle and primary schools at Chakradharpur. There are three hospitals, namely, Narayan Zonana. Joint Board Dispensary and South-Eastern Railway Hospital here. It contains three libraries including the one attached to the railway institute. There are three *dharmashals* at Chakradharpur. Several flour mills, saw mills and an oil mill are also situated here. The place is particularly famous for a large number of *biri* factories. A magnificent building in the town which is popularly known as Rajbari once formed the office and residence of the Raja of Porahat. It has a post and telegraph office and also a public telephone exchange. Since the opening of the railway in 1890, the importance of Chakradharpur as a trade centre has greatly increased. Lac, rice, oil-seeds, tusser, cocoons, *sabai* grass and

biri are among the principal articles exported in considerable quantities from the Chakradharpur railway station. It is a healthy place on the South-Eastern Railway and has railway importance. There is also a turnover of lime-stone, manganese and hides.

Chakradharpur has the office of a Railway District Traffic Superintendent and other important railway offices. There is a fairly large railway settlement with some buildings for the accommodation of the railway employees. The Station Committee controls the sanitary arrangement of the railway colony. There is also a railway institute, the first storey of which is used as a cinema hall. On the roof is a very big water reservoir that can contain 1,20,000 gallons of water. The railway colony is supplied water from this tank through pipes. A weekly market is held here on every Wednesday.

Chakulia.—A village and a railway station of the South-Eastern Railway, situated 20 miles south-east of Ghatsila, with which it is connected by road. It has a police-station, a post office, lower primary, middle, high and basic schools and also a library. There are remains of buildings, which are believed to have been indigo factories. The place is a rice and grain exporting centre, a market being held on every Saturday, at which rice, *mahua*, and lac are largely sold. When Captain Morgan was attempting to establish British rule in Dhalbhum in 1768, Chakulia was held by a petty zamindar, who defied the British. Captain Morgan finally sent one of his sergeants (Bascombe by name) to seize the zamindar, but he gave no little trouble, attacking Sergeant Bascombe on his march several times, and cutting down trees in the road to prevent his progress. The sergeant's force had to expend half their ammunition before they could drive off their assailants. On arriving at Chakulia their difficulties ceased, for the villagers, who had suffered from the zamindar's oppression, beheaded him. At Bond, about 6 miles east of Chakulia, a fair, lasting a week, takes place in the month of *Magh* during the Saraswati Puja.

There is a large landing ground for aeroplanes at Chakulia which was built during the emergency of the Second World War. Here different types of planes can land.

Chiria.—It is situated about 60 miles south-west of Chaibasa. From Manoharpur railway station on the South-Eastern Railway, the Indian Iron and Steel Company has its own light railway up to Chiria. It is 15 miles from Manoharpur. The Indian Iron and Steel Company has taken a lease of 6.41 square miles for mining purpose at Budaburu and 164.58 acres for camp, etc. Budaburu is the highest peak, 2,739 feet from sea-level and 1,700 feet from the level of the Chiria Valley. Ajitaburu and Ledaburu are being developed and worked out and the iron-ore is transported down hills by gravity inclines and then for a distance of 15 miles

by light railway down to the broad gauge at Manoharpur railway station of the South Eastern Railway. The present output of the ore is 35,000 tons per month. Approximately 3,000 labourers are employed at the mines and at Manoharpur for the loading of ore in broad gauge wagons. The iron-ore deposits were discovered in 1912. The prospecting work was started in 1916 and was continued till 1918 when the regular mining work was taken up. The construction of the light railway was started in 1919 and completed in 1920 when the Company commenced railing and despatch of iron-ore from the mines. The output in the early stages of the mining operations was about 10,000 tons per month and has risen steadily to reach the present figure of 35,000 tons per month.

The Chiria camp contains a hospital and hutments for the labourers.

Chittreswar.—The village Chittreswar is about 35 miles from the Chakulia railway station. It bears no importance except for a *mela*.

A big *mela* is held on the day of *Shiva Chaturdashi*. There is an old temple where the Lord Shiva is worshipped. About ten thousand people from contiguous localities and also from the bordering villages of the Midnapore and Mayurbhanj districts congregate. It is a very popular *mela*. It lies under Baharagora police-station.

Chitimiti.—A *mela* is held at village Chitimiti about 18 miles south east of Chaibasa during *Chaitra Sankranti* which continues for five or six days and is called *Chaitra Sankranti mela*. There is a temple of *Shiva* here where the assembled people offer sacrifices. Shopkeepers of different varieties assemble there. *Chhow* dance and *Ho* dance are performed in the *mela*. There is a Government subsidised high school, an Adibasi hostel and a *gram panchayat katchery* at Chitimiti.

Choya.—It is about 12 miles south from Chaibasa on Pukhria-Parsa District Board road.

A *mela* is held during the *Chaitra Sankranti*, which continues for five or six days, and is named as *Chaitra Sankranti mela*. About five to six thousand people assemble on the occasion.

Chhota Nagra.—This is a beauty spot which could be reached by a forest road from Gua which is, however, closed in the rains. There is an iron drum (*nagara*) which has not rusted even after being thrown away apparantly for many years. The exact history is not known. There is a forest rest house in attractive surroundings and a fire watch-tower here.

Deogam.—A village on the west bank of Baitarani river, about 4 miles west of Jaintgarh in the Kolhan, and about the same distance from Champua in Keonjhar district (Orissa).

It was formerly regarded as *tirth* (holy place) by the Gours and Goalas, but now the people of all the communities regard the same as a *tirth* and a *mela* is held here on the last day of ***Paush***, that is, on ***Makar*** and on the 1st day of ***Magh***. Every year people assemble there in large number and take bath in the Baitarani river. There is a temple of *Shiva* here.

The temple was constructed by a Goala with the consent of *Sadhus* and Brahmins. It is a fairly big *mela* and is called Ramtirth *mela*.

Dhalbhum.—The former Dhalbhum estate, which has now vested in the State, has a fascinating story. The following description of this estate has been given in the last District Gazetteer (1910):—

" The legendary origin of the family, that holds the estate is as follows:—Its founder was a washerman, who concealed the goddess Kali in a heap of dirty clothes at the Kapargadi Ghat, when as Rankini she fled from a demon of Panchet, who was in pursuit of her. The goddess, in gratitude, gave the washerman a young Brahmin girl, a ward of her own, to wife, and the zamindars of Dhalbhum are the descendants of this union. They claim to be Rajputs, but this claim is doubtful. Colonel Dalton points out that the origin of the story appears to be that a Bhumij chief of Dhalbhum, probably at the instigation of a Brahmin, stole from its shrine in Panchet an image of Rankini and set it up as his own tutelary deity. 'The Raja of Dhalbhum', he says 'is no doubt of Bhumij extraction but for him the Heralds' College of the period failed to manipulate a Rajput descent.

" The British first came into contact with Dhalbhum in 1767 when, as related in the Chapter on History, a small British expedition was sent against the Raja, who had defied the British authority. The expedition was successful, the Raja being captured and sent a prisoner to Midnapore. His nephew, Jagannath Dhal, was installed in his stead on promising to pay a revenue of Rs. 5,500 per annum; but he soon fell into arrears, and in his turn defied the British. For some years there was a military occupation of the country, but the rebel Jagannath Dhal still held out. He was deposed and a relative was given the property in his stead; but the latter could only hold a portion of the estate and Jagannath Dhal had possession of the remainder. Eventually, in 1776 as Government wished to avoid further expense in military operations, and as it appeared that the Government candidate, Baikunth Dhal, had not the support of the people, it was decided that the settlement should be offered to Jagannath Dhal on certain conditions, which he accepted. An assignment

of lands, as an under-tenure, was made to Baikunth Dhal and the *pargana* was settled with Jagannath Dhal on his engaging to pay to Government the first year sicca Rs. 2,000, next year Rs. 3,000 and the third year Rs. 4,000. The estate was permanently settled in 1800 at the latter assessment. Accordingly, allowing for the difference between the sicca rupee and the Government rupee, the zamindar pays a land revenue of Rs. 4,267.

"Dhalbhum formed part of the district of Midnapore until 1833, when the district of the Jungle Mahals was broken up. It was then constituted a part of the Manbhum district, and in 1846 it was transferred to Singhbhum owing to press of criminal work in Manbhum. In 1867 it came under the management of the Court of Wards on the death of its proprietor, Jagannath Dhal, who left 12 Ranis and two sons, of whom the eldest Ramchandra Dhal was then 5 years old. The latter, on attaining his majority, received charge of his estate in April, 1883 from the Court of Wards, together with Rs. 2,21,000 which had accumulated during his minority. He immediately plunged into a life of extravagance, and in the course of about 3½ years squandered nearly 7 lakhs of rupees. He died in January, 1887 in his 25th year. Shortly before his death, having contracted debts amounting to Rs. 2,11,237, he applied for relief under the provisions of the Chotanagpur Encumbered Estates Act (VI B. C. of 1876) and the property was then managed as an encumbered estate. A few years later, as a result of a law suit instituted on the death of Ramchandra Dhal, it passed into the possession of his uncle Babu Satrughan Dhal. In 1903, as the latter had contracted debts amounting to 4 lakhs of rupees, it was on the application of his heir, again brought under the Encumbered Estates Act. It had, however, been previously leased out for 25 years."

Dhalbhum Subdivision.—South-eastern subdivision of the district, extending over 1,167 square miles. It contains 1,381 villages and 3 towns and its population is 6,13,504, as recorded in 1951 census. The density of population of the subdivision is 528 per square mile. Jamshedpur is the headquarters of the Dhalbhum subdivision. Prior to the creation of the subdivision in 1920, a Magistrate used to be deputed to Jamshedpur to dispose of cases. The development of the steel factory along with the other allied industries led to an enormous expansion of the town of Jamshedpur. For administrative purposes a Subdivisional Officer is posted at Jamshedpur who is in charge of the subdivision and is helped by several other Magistrates. An Additional Superintendent

of Police is exclusively posted for the subdivision whose headquarters are at Jamshedpur.

Dimna Lake.—Dimna lake is a natural watershed in the lap of Dalma Hills and has a remarkable natural scenery. The Tatas have utilised this watershed for the supply of drinking water to the ever-growing town of Jamshedpur. The lake is situated about 10 miles north-east from Jamshedpur and connected by a metalled road. It is a beauty spot and is largely visited by the people of Jamshedpur and the neighbourhood. (For further details please see the chapter on Jamshedpur .)

Dugni.—It was a *Pir* or division containing 66 villages when Seraikela was a State. It was held by Babu Ranjit Singh, a descendant of Bishnu Singh, fourth son of Bikram Singh, the first Chief of Seraikela, who gave him a grant of the tract for his maintenance.

Dumaria.—A *mela* is held at village Dumaria, called *Chata parab* during the month of May. It is held for offering sacrifices to Lord Shiva. The *mela* continues for three to four days. It is about 32 miles on Dumaria-Bhalandia-Kolhan road. About two to three thousand people assemble there. During the *mela* Ho dance is held. Shopkeepers from different places come and they deal in sweetmeat, tea, cloth, *handia*, etc. There is a high school which has been started by Adimjati Seva Mandal.

Galudih (Kharsawan).—This is the headquarters of the Indian Copper Corporations Mines Department for working Lapsa Kyanite mines. It is about 10 miles from Kharsawan. About 1,500 labourers work in the kyanite mines at Lapsa. It has the reputation of possessing the world's best deposit of kyanite stone.

Gamharia—It is a railway station on the main line of the South-Eastern Railway. This is also a junction on the main line and the Purulia line. This is at 19 miles on the Seraikela-Adityapur road. There are a Community Block office and a dispensary, a school and a library here.

Ghatsila.—A village and headquarters of a police-station of the same name, situated on the river Subarnarekha, 50 miles (by road) east of Chaibasa and 62 miles (by rail) from Chakradharpur. The population of the village remained somewhat static in course of five decades as it is apparent from the census of 1951 which records 1,884 souls as against 1,784 in 1901. It contains a station on the main line of the South-Eastern Railway, a rest bungalow, a police-station, a sub-registry office, Urdu lower primary and high schools, a library and a State-managed hospital with 9 beds. Ghatsila was formerly the headquarters of the Rajas of Dhalbhum.

The village contains a temple of Rankini, the tutelary goddess of the former Rajas of Dhalbhum, to which the following local tradition attaches. The temple of Rankini, it is said, was formerly situated on a rock near Mahulia, where human sacrifices used to be offered to her, the belief being that the goddess herself killed the victims. A former Deputy Commissioner of Singhbhum, Dr. William Hayes, hearing of this, put the belief to a practical test. He asked the votaries of the goddess whether she would be able to kill a man if he was kept locked up in the temple, on their replying in the affirmative, a man was shut up in it for a whole night and found unhurt in the morning. After this it is said, Dr. Hayes had the image of the goddess transferred to the thana compound at Ghatsila, where it was not likely that any human sacrifices could be performed. There appears to be little doubt that such sacrifices were once offered to Rankini. Colonel Dalton, for instance, writes:—"Rankini especially rejoiced in human sacrifices. It is freely admitted that in former years children were frequently kidnapped and sacrificed at her shrine, and it cannot be very positively asserted that the practice of offering such victims has long been discontinued". *Binda parab* in honour of Rankini Devi has been described elsewhere.

Another festival called *Indra parab* is celebrated in the month of August, when the zamindar of Dhalbhum raises an umbrella in honour of Indra, the god of rain. The umbrella is attached to the top of a big pole of *sal* wood, and it remains fixed in the ground for nine days: on the tenth day the pole is brought down and submerged in water.

At Dharagiri, 6 miles north of Ghatsila, there is a waterfall 20 feet high, the legend about which is that the flow of the water is diverted if any man whose mother is not chaste places his head under it. Three miles north-west of Ghatsila, at a place called Panchapandav, a stone can be seen bearing the figures of five men; the legend is that they are figures of the five Pandava brothers. A market is held here on every Wednesday. At Tikri, eight miles from Ghatsila, there is a stone quarry at which rough stone utensils are made and exported to Calcutta.

There is an Indian Copper factory at Ghatsila which was established in 1924 and manufactures copper ingots and brass sheets. The factory has been described else where.

The surroundings and the climate of Ghatsila attract visitors. Tourism may develop at this place if proper facilities are provided.

Goilkera.—A village in the Kolhan, situated 20 miles (by rail) south-west of Chakradharpur. It contains a station of the South Eastern Railway, a forest rest house and a Forest Ranger's bungalow. It also contains a dispensary and a primary school. Formerly an insignificant village, Goilkera is now one of the chief

timber exporting stations in Singhbhum, the whole tract between Goilkera and Manoharpur being covered with *sal* jungles. A market is held on every Friday, at which lac is largely sold. About 4 miles west of the station there is a long railway tunnel known as the Saranda tunnel, the jungles round which were until recently said to be infested with man-eaters. Near the tunnel there is an image of *Shiva*, but no one can say by whom, when and how it was brought here.

Gua.—A village with picturesque surroundings in the interior of the Saranda Forest Division, south-west of Chaibasa at a distance of 57 miles by rail and 52 miles by road. It developed into a colony when the Indian Iron and Steel Co. started mining operations in 1921. It is a station of the South Eastern Railway. Gua is situated in a valley by the side of the Karo river, which is a fast flowing river to the north of the colony. It is a perennial source of water for the people living in the colony. The Indian Iron and Steel Co., Ltd., is mining iron-ore on one of the hills to the west of the colony. The hill is 2,800 feet above the sea level and is called Banmaliburu. The ore is lowered by an aerial ropeway. On a small hill to the south-west of the colony there is a hill called Jhilingburu where manganese ore is extracted on a small scale. The ore is despatched to the Steel Works at Burnpur near Asansol which is at a distance of nearly 179 miles.

The colony has developed fast during the last 15 years. It contains a hospital and has a water-supply system. The colony is electrified as well. Its population is 6,000. The rest bungalows belong to the Indian Iron and Steel Company. The small town has picturesque surroundings. A big *hat* is held here on every Sunday.

Haludpokhar.—A village in Potka police-station 12 miles south of Jamshedpur and 26 miles east of Chaibasa; and is connected by metalled roads both from Jamshedpur and Chaibasa. Haludpokhar is an important station of the South Eastern Railway. Hides are exported from here. A market is held here every Saturday which attracts a large quantity of rice and *sabai* grass. Haludpokhar has a temple with an image of Rankini, the family deity of the previous line of Zamindars of Dhalbhum. Stone utensils are manufactured at Dasi and Kadal which are 5 miles off from Haludpokhar. At Harina, 7 miles south-east of Haludpokhar, there is a famous *Shivalinga* which is worshipped on the last day of the month of *Jyaistha*. According to legend, on this day a number of *Shivalingas* spring up from ground near the original Shivalinga and disappear. On this occasion a fair is held which lasts for three days.

According to 1951 census, the village extends over an area of 1,583 acres with 2,732 persons (1,410 males and 1,322 females). The number of occupied houses is 587. It has primary and middle schools.

Hatgamaria.—It is 20 miles south of Chaibasa, on Chaibasa-Jaintgarh Road. It occupies a very important position in Kolhan as three important roads branch off from here to three different directions, viz., one to Jagannathpur, Jamda and Gua, another to Jaintgarh and the third to Majhgaon and Benusagar. Kendposi railway station on the Rajkharsawan-Gua Branch of the South Eastern Railway is only about one mile off from here. Timber and china clay in huge quantities are exported from this station. The population of this place is about 1,000 and consists mainly of the aboriginals.

There are a Public Works Department inspection bungalow, a veterinary hospital, a middle school, a primary school, a welfare centre with a grain-*gola* and a Government dispensary at Hatgamaria. District Board Overseer and Range Officer of the Forest Department live here. There is a very important minor irrigation scheme, known as Krishna Ballav Bandh, here after the name of the then Bihar Revenue Minister. A *hat* is held here on every Monday which is one of the biggest *hats* of this district. About 3,000 people assemble on the *hat*. This place is an important halting station for the buses and other conveyances.

Hirni Fall.—The Hirni fall is situated in between Hessadih and Bandgaon on the Chaibasa-Ranchi main road, 43 miles away from Chaibasa. The fall itself is about 100 yards off the main road and is served with a feeder road by which a car can be taken to a place very near to it. The place is very well served by regular and direct bus services from Chaibasa or Chakradharpur. There are two well furnished Public Works Department inspection bungalows at Hesadih and Bandgaon respectively equidistant from the fall, the distance being approximately five miles.

Icha.—It was a *pir* or division containing 45 villages when Seraikella was a State. It was held by Babu Gangaram Singh, who traces back his descendants to Abhiram Singh, the fourth Raja of Seraikela. Tradition relates that Abhiram Singh, while still a boy, quarrelled with his father and fled to Mayurbhanj, where he stayed for 14 years. At the end of that time, he wished to return to Seraikela, whereupon the Chief of Mayurbhanj made a grant to him of Kuchang, in which Icha was included, on condition that he conquered them. Abhiram Singh conquered Kuchang, and on his accession to the chiefship of Seraikela by about 1803, made over Icha to his brother Damodar Singh.

Jagannathpur.—A village in the Kolhan Government estate, situated 29 miles south-west of Chaibasa by the road *via* Hatgamaria and 24 miles by the road *via* Jhinkpani. The village

contains a Kolhan Government estate inspection bungalow, a high school, a lower primary school, a grils' lower primary school, with an Adibasi girls' hostel attached to it, a *makhtab*, a post office, a Government hospital, a Forest rest house, a Welfare Centre with a grain-*gola*, a *gram panchayat katchery* and a small library. Jagannathpur is so called after Jagannath Singh, a former Raja of Porahat, who built a mud fort, of which traces can still be seen. It is believed that Jagannath Singh's Rani excavated a tank on the east of the fort, and that another tank in front of which was once a Forest Ranger's bungalow and is now a Forest Guard's quarters, was excavated by his priest Santra. On the ruins of the fort there is now a tank which is comparatively recent. Pauri Devi, the goddess of the Bhuiyas, is enshrined under a *sal* tree and at the entrance to the fort there is a stone in the ground representing a goddess called Duarsini. No one at Jagannathpur will touch this stone, for they believe that any one who does so will soon die. There is a flat stone in the middle of the fort, now under water in the tank on which, tradition relates, one Ritu Gondai, a Kol, who rebelled against a Raja of Porahat, was pounded to death by the Raja. It is a growing centre for business and the market is expanding. Jagannathpur has picturesque surroundings. The National Extension Service Block Office has recently been opened here.

Jaintgarh.—A village in the Kolhan Government estate, situated on the river Baitarani, 36 miles south of Chaibasa. The village has a Kolhan Government estate inspection bungalow, a Public Works Department rest shed, a senior basic school, a Government subsidized high school, a Welfare Centre with a grain-*gola*, a *gram panchayat*, a Forester bungalow and a Government dispensary. A *hat* is held here every Saturday where there is a big turn-over of rice and paddy. The *hat* is an important one as people from Keonjhar and Mayurbhanj districts in Orissa State come to it to sell grains and merchants from Chaibasa to purchase. According to tradition, Jaintgarh was established by an ancestor of the Raja of Porahat, Kala Arjun Singh, who conquered a place called Chamakpur in Keonjhar and to commemorate his victory constructed a mud fort (*garh*) here. An extensive flat mound of earth is all that is now left of the mud fort. It is situated on the bank of the Baitarani and commands a beautiful view. In its centre lies a piece of stone which is the image of the presiding deity of Jaintgarh, Jatapath. The image is covered by heaps of earthen toy-horses which are offered in large numbers by the Bhuiyas. A portion of the site of the fort is now occupied by the *manki* of the village, who has constructed his house on it with the permission of the Kolhan Superintendent. The favourite goddess of the Bhuiyas, Pauri Devi, occupies a place at the entrance to the *garh* and also has her share of offerings of earthen toy-horses.

About four miles to the west of Jaintgarh there is a sacred bathing place on the Baitarani, called Ramtirtha. According to tradition, Rama halted here when marching to Lanka (Ceylon) to rescue his wife Sita from Ravana. It consists of a deep natural reservoir which is fed by a small waterfall and attracts visitors in the winter season. Foot-prints are clearly seen on the stone slab in the river and the local belief is that the foot-prints are of Ram, Lakshaman and Sita.

Jamda.—It is 44 miles off from Chaibasa by road. It is also connected by rail from Chaibasa and Jamda itself is a station on the Rajkharsawan-Gua Branch of the South-Eastern Railway. Its population is near about 1,500 and consists mainly of Gaurs, Hos and other non-aboriginals. There is a colony mainly for the businessmen. This place is very important as there are rich deposits of iron-ore and manganese. Timber and other forest products are also found here in huge quantities. Due to these factors it is a very important centre of business and as such many non-aboriginal businessmen have infiltrated into this place and have settled here. There are a District Board bungalow, forest quarters, a lower primary school and a library here. There was also a police-station at this place but recently it has been shifted to Noamundi. A *hat* is held here on every Wednesday where rice, oil-seeds, forest fruits and fowls are mainly sold. About 800 people assemble at the *hat*.

Kalimati.—A village in Jugsalai police-station, situated on the main line of the South-Eastern Railway. It extends over an area of 1,915 acres with 3,510 persons (1,903 males and 1,607 females according to the census of 1951. This small and little known hamlet is the main site selected fifty years back for the location of the steel factory of the Tatas. Kalimati is the nucleus of the steel city of Jamshedpur. The name of the railway station was changed from Kalimati to Tatanagar to commemorate Shri J. D. Tata.

Kandra.—Kandra is a railway station, on the Tata-Adra line. This is also a junction between this line and Kandra-Sini line. The place has gained importance on account of the establishment of Seraikela Glass Works, Ltd. at this place. The Glass Works is still under expansion. It produces glass-sheets and glass-tubes. It will be a satellite town of Jamshedpur.

Kantamandi.—It is about 40 miles south from Chaibasa.

A *mela* is held during Dasahara Durga Puja. The *mela* continues for two days. During the *mela* Ho dance is held and about 2,000 people assemble.

Karaikela.—Karaikela was formerly an estate of the Porahat Raja and at the time of the revolt of 1857 was held by

a *jagirdar*. After the uprising of 1857, the latter accompaniedthe Raja of Porahat when he was deported to Banaras; and the Raja's estate having been confiscated, Karaikela was given in 1860 to the Raja of Seraikela as a reward for his loyal services during the great uprising of 1857. Karaikela now forms part of the Singhbhum district with the merger of Seraikela State with the State of Bihar.

Kera.—It is about 7 miles from Chakradharpur and 23 miles from Chaibasa.

A *mela* is held at Kera Khas during *Chaitra Sankranti* every year. The *mela* continues for two days. People assemble there in large numbers and they offer *pujas* in the temple of goddess Bhagbati. During the *mela* Chhow dance and *kirtans* are performed.

Kesnagarh.—A village situated south-west of Lalgarh in the extreme south-east of the Kolhan. There are long mounds of earth here marking the outlines of a large fort said to have been the fort of Raja Kesna. Legend relates that he and all his property were destroyed by fire from heaven for having slain a cow and wrapped a Brahman in the hide, which, tightening as it dried, squeezed him to death. His son Benu was saved by a Tanti (weaver), whose oxen had spoken with human voice the day before, as he was ploughing his field, and warned him of the fate which awaited the place. There has been no excavation in this area yet.

Khairpal.—It is about 36 miles south from Chaibasa.

A *mela* is held here during *Chaitra Sankranti* in the month of April and is called as *Chaitra Sankranti mela*. The *mela* continues for three days. About three to four thousand people assemble here. During the mela Ho dance is performed.

Kharsawan.—The Raja of Kharsawan traces back his descent to Bikram Singh, a younger son of the Raja of Porahat, who was given a fief in the Seraikela State and rapidly extended the limits of his domains by conquests from his neighbours. Among the tracts conquered by him was Kharsawan, which then comprised the two *pirs* of Kharsawan and Asantalia. The former he settled on his second son, from whom the Chiefs were directly descended. The latter he settled on his third son, but on the failure of male heirs, it passed into the possession of the Chief of Kharsawan. Relations with the British are traced back to 1793, when, in consequences of the disturbed state of the frontier tracts called the Jungle Mahals, its Chief, who bore the title of Thakur, was compelled to enter into an agreement promising not to give shelter to fugitives from British territory. In 1820 the Raja of Porahat concluded an agreement with the British

by which he became a tributary Chief, and apparently it was intended that a similar agreement should be entered into with the Thakur of Kharsawan, but no such agreement can be traced. No tribute or revenue was paid, but the overlordship of the British and the liability of the Chief to furnish troops, when called upon, were recognised.

In 1832 the State was invaded by the rebel, Ganga Narayan, who had headed a rising of the Bhumij tribe in Manbhum against the British. Having been driven out of Manbhum, Ganga Narayan endeavoured to rally round him the Hos of Singhbhum, who were then resisting the claims of the Thakur of Kharsawan to a part of their territory. They, accordingly, demanded that he should in the first instance make an attack on the Thakur's fort. He was killed in the assault and his head sent to Captain Wilkinson, the British Agent, by the Kharsawan Chief. As in the case of Seraikela, the British assumed a closer control of the State after the annexation of Kolhan, and the Chief was treated as a subordinate of the Principal Assistant at Chaibasa. Though he had full power to decide civil cases, an appeal lay to the latter, while his authority in criminal cases was limited. Eventually he gave up trying any criminal cases and referred even those of the pettiest character to the British Courts.

During the uprising of 1857, the Chief, Ganga Ram Singh Deo, rendered good service to the British and was rewarded by a grant of four villages, Setahaka, Simudiri, Samraidi and Dalki in the former Sadant *Pir* of Chakradharpur, out of the confiscated estate of the Porahat Raja.*

The gigantic political upheaval for freedom against the foreign domination also influenced the people of this tiny State of Kharsawan and by the middle of 1946 the agitation and progress in India had its impact throughout the length and breadth of Kharsawan. The people of this State were influenced by the agitation launched by the *Prajamandals* against the tiny States of Seraikela and Kharsawan. The ruler of Kharsawan conceded part of the demand of the *Prajamandal* on the 14th November, 1947. They were, however, contemplating open revolt by organising parallel Government when the States were integrated with India. This integration was done in pursuance of the State's Ministry's policy of the merger of the small inviolable States either into union of small States or with the adjacent Provinces. At first both Seraikela and Kharsawan were handed over to the Government of Orissa. There were mass public meetings at Seraikela and Kharsawan to register a protest against merger of the States with Orissa. There was a firing at Kharsawan

---

* For further details please see "1857 in Bihar" (Chotanagpur and Santhal Parganas) by P. C. Roy Chaudhury, (1957).

and a strong movement started for convincing the Central Government to transfer the two States to Bihar of which they were claimed to be integral parts. Ultimately the efforts of the people were crowned with success and on the 2nd August, 1949, the feudatory States of Seraikela and Kharsawan, which previously formed part of the State of Orissa, integrated to Singhbhum in Bihar.

The town of Kharsawan has a population of 3,438, according to the census of 1951 and has a Notified Area Committee which has replaced the old Municipal Board. It has a hospital in charge of an Assistant Surgeon, a high school, a girls' middle school and the headquarters of the Range Officer. This is now connected by an all-weather road with Seraikela (11 miles) and with Rajkharsawan railway station. It is served by an extra department post office. The National Extension Service Block Office has also got its headquarters at Kharsawan.

Kolhan.—The Kolhan is lying between 21° 58′ and 22° 43′N. and 85° 21′ and 86° 3′ E., with an area of 1,351 square miles, according to the census of 1951. The population, according to 1951 census, is 4,07,386 (2,00,973 males and 2,06,413 females). The Kolhan is an upland tract, varying in elevation from 750 feet above the sea level in the neighbourhood of Chaibasa to upwards of 1,000 feet in the south. On the north, east and south the tract is for the greater part open and gently undulating; it is covered with numerous villages and is well cultivated. The depression between the ridges is sown with rice and some portion of the uplands with cereals, pulses or oil-seeds. In the south-east the surface is very rocky and covered with jungle; and in the west and the south west are mountainous tracts thickly covered with jungle and very sparsely inhabited. The villages here are mere hamlets scattered on the hill slopes, and the area of the forest covers 1,70,069.82 acres.

The earliest settlers of the Kolhan is attributed to be *Sarawak*, *Serak* or *Sarak* which is clearly a corruption of *Sravaka*, the Sanskrit word for a "hearer" which was used by the Jains for lay brethren, that is, Jains, engaged in secular pursuits as distinguished from *Yati*, that is, priest or ascetic. It appears probable that these *Sravakas* or lay-Jains penetrated into the fastness of the hills and jungles of Singhbhum, where they were rewarded with the discovery of copper, upon the working of which they must have spent all their time and energy.* On the authority of several Jain temples extant, in the former district of Manghum, which date back to about the 14th or 15th century A. D., it may be inferred that it was during this period that the Jains penetrated to Singhbhum. In the Kolhan there are a number of old tanks which are attributed to be dug by these lay-Jains.

*Proceedings, Asiatic Society Bengal, 1869, pp. 170—175.

The *Saraks* appear to have been replaced by the Hos, who still continue to form the bulk of the population. *

Before the advent of the British in this tract, the Hos successfully resisted the three formidable invasions of the chiefs of the neighbouring territories, but in 1821 a British force was employed to subdue them. After a protracted but intermittent struggle for 15 years the Hos were finally subjugated and were brought under the direct control of the British Government and the Kolhan became a Government estate.

The first settlement of the Kolhan was made in 1837 and was followed 30 years later, by a resettlement carried out by the then Deputy Commissioner, Dr. Hayes. This was followed by another settlement which commenced in 1895 and was brought to a conclusion in 1897. The latest settlement in the Kolhan was taken up in 1913 and concluded in 1918 by Mr. A. D. Tuckey and is popularly known as Tuckey's settlement. The passing of the Land Reforms Act in 1952 obliterated the particular distinction of Kolhan being a Government managed estate.

Since the British occupation of the Kolhan (1837) it was kept under the direct control of the Deputy Commissioner of Singhbhum. The Kolhan is now administered by an officer known as the Kolhan Superintendent who is assisted by other officers. The Kolhan Superintendent is under the control of the Deputy Commissioner, Singhbhum. The peculiar feature of the Kolhan administration is that the collection of rent is still done by the local officers called *mankis* and *mundas*. The *mundas* are the village headmen and the *mankis* are the headmen of *pirs* or divisions. The Kolhan is divided into 75 local divisions or *pirs*, each comprising a group of 3 to 23 villages. Each division is under a *manki* who supervises the work of *munda* or village headman. The other village officials are *tahsildars* or village accountants and the *dakuas* or the village underlings.

The bulk of the inhabitants are Hos, and the policy of Government has been to keep the Kolhan as a reserve for them. In spite of this, the number of foreign settlers has increased considerably during the second half of the 19th century. As a result of the influx of the foreigners the Hos in many cases parted with their lands to the new comers. Though at the settlement of 1867 the transfer of holdings to aliens without the consent of the *mankis* and *mundas* and the express sanction of the Deputy Commissioner was considered inadmissible, yet 611 entire holdings were sold, and 1,252 and 1,405 part holdings were sold and mortgaged, respectively during its currency. In most cases the sales were

* For further investigation please see "Jainism in Bihar" by P. C. Roy Chaudhury (1956).

by verbal agreement, and the prices received were inadequate and frequently trivial. To prevent the Hos being supplanted in this way, transfer of land by gift, sale or mortgage, without the permission of the Deputy Commissioner has been expressly prohibited by a condition in the *pattas* given at the settlement of 1897, and the headmen have been made responsible for reporting any neglect of these orders. The alienation restrictions with regard to the transfer of property are still in operation among the Hos of the Kolhan.

Kuchang.—Kuchang was a *pir* or division containing 153 villages when Seraikela was a State. It originally formed part of the territory ruled over by the Chief of Mayurbhanj and was the first part of Seraikela with which the British came into contact. A part of British sepoys having been cut off at Kuchang, a force was sent in 1770 to take possession of it for the British. This intention, however, was given up, and the Chief of Mayurbhanj was induced to oust the zamindar and instal the zamindar of Bamanghati in his stead. The latter was to be answerable to the Resident at Midnapore for the peace of the border, and was liable to be dispossessed on failing in his duty. Subsequently, about 1800 Kuchangs was held by a rebellious Bhuiya Chief and was granted to Abhiram Singh, fourth Raja of Seraikela on condition that he killed the Chief and pacified the country. Since then Kuchang has been in the direct possession of the Raja of Seraikela till Seraikela was merged into Bihar.

Majhgaon.—It is situated 40 miles south of Chaibasa by the road *via* Hatgamaria. It is mainly populated by aboriginals, Gaurs, Tantis and Mahammadans. There are a Kolhan inspection bungalow, a dispensary, a middle school, a welfare centre with a grain-*gola,* a post office and a *gram panchayat* here. A small weekly *hat* is held here on every Friday. A police-station has been opened here recently. There is also a Forest Beat Officer's office at this place. The Kolhan Officers hold their camp Courts here in the Kolhan inspection bungalow for the convenience of the aboriginals.

Manoharpur.—A village with a beautiful background in Kolhan, situated 38 miles (by rail) south-west of Chakradharpur, close to the junction of the Koina and Koel rivers. The village contains a railway station of the South-Eastern Railway, a post office, a Forest Ranger's bungalow and a police-station. There are four schools, namely, Iswar Pathak High School, S. P. G. Mission Middle School, S. P. G. Mission Girls' Lower Primary School and Manoharpur Balika Vidyalay. There are rest houses of the Forest Department, Kolhan and South-Eastern Railway. Besides a Government hospital, there is a S. P. G. Mission hospital. There is also a library called the Manoharpur Public

Library. There are a number of *biri* factories and two saw mills and 3 flour mills with diesel engines. The population according to the census of 1951 is 41,734. It is an important centre of the timber export trade and a market is held here on every Sunday.

Manoharpur is a *lakhiraj* village which was granted to Abhiram Tung for his life for sevices rendered by him to the British Government during the rising of 1857. Formerly the name of the village where the Manoharpur bazar at present stands was Larkain, while Manoharpur was the name of the village where the *lakhirajdar* resided. This has since vested in Government. A Community Block office has recently been opened here. A big *hat* is held here once in a week.

Maubhandar.—There is a big factory of India Copper Corporation here, where about 10,000 labourers are working. It is situated at a distance of 1½ miles from Ghatsila railway station on the bank of Subarnarekha river. The copper mine is situated at Musabani at a distance of 6 miles from Maubhandar and the ores are carried by ropeway service.

Noagaon.—It is about 45 miles south from Chaibasa on Benusagar-Majhgaon-Kolhan Road.

A *mela* is held during Durga Puja in *Ashin* (October) and is called Dashara *mela*. The *mela* continues for two days. During the *mela* Ho dance is performed and about two to three thousand people assemble there.

Porahat Estate.—The Porahat estate with its sub-estates or tenures, situated in the Singhbhum district in the Chotanagpur Division lies between parallels 22° 15′ and 22° 54′ north latitude and between meridians 85° 5′ and 85° 46′ east longitude.

Its extreme length from north to south is about 40 miles. Its extreme breadth from west to east is 36 miles and its area including the four subordinate tenures of Anandpur, Kera, Bandgaon and Chainpur is 813 square miles. Details of the area are given below:—

> Khas Porahat 514.20 square miles, Anandpur 188.17 square miles, Kera 75.06 square miles, Bandgaon 25.13 square miles, Chainpur 10.46 square miles and the total is 813 square miles.

The estate, including sub-estates, is bounded on the north by the Ranchi district, on the east by the ex-Kharsawan State and portion of the Kolhan Government estate, on the south by a portion of the Kolhan Government estate and Ranchi district and on the west by the Ranchi district. It is mostly a hilly tract and largely covered with forests. There is, however,

a fairly open belt of country from north-east to south-west, through which the railway runs. This part is healthier and more extensively cultivated than other parts of the estate. It has of late attracted a number of timber merchants.

There are conflicting accounts of the origin of this estate and of its founders. The head of the Singh family in Singhbhum had always been the Raja of Porahat and according to custom, the *Kumars* or second sons had portions of the territory under the Raja granted to them in lieu of their maintenance. The portions of the estate thus alienated were Anandpur, Kharsawan, Seraikela and Kera.

Kharsawan and Seraikela obtained early independence and the latter by a conquest also acquired large tracts outside Singhbhum. There is more than one legend as to the origin of the family. One of these, apparently an aboriginal tradition, alleges that its founder was discovered as a boy in hollow tree, which a Bhuiya forester was cutting down. This boy became the head of the Bhuiya tribe, and worshipped Pauri Devi, a peculiarly Bhuiya divinity, corresponding to the Thakurani Mai of the Bhuiyas in Keonjhar. The Porahat family, however, claimed to be Rathor (Kadambansi Rajput) of pure blood, hailing from Marwar, who while passing through the country on a pilgrimage to the shrine of Jagannath at Puri, was chosen by the people as their Raja on his proving victorious in a contest of horsemanship. An intractable horse had strayed into the territory of Bhuiyas, who in want of ruler, pledged themselves to submit to any man who could subdue this animal to saddle and bridle. Sometime afterwards a dispute arose between the Bhuiyas of eastern Singhbhum and the Hos of the central tract of the Kolhan. The Chief joined the Hos and after they had put down the Bhuiyas, claimed sovereignty over both the tribes. Yet another tradition relates that the Bhuiyas being hard pressed by the Hos, sent a message to Puri to obtain the help of Rajput soldiers, who had come to Orissa with Akbar's general Man Singh. Three Rajput brothers agreed to espouse their cause on condition that if they overcame the Hos, they should be acknowledged as the rulers of the Bhuiyas. These terms were accepted by the Bhuiyas who agreed to be their vassals. One of the three brothers then came to Singhbhum and having trained the Bhuiyas in the methods of warfare, subdued the country which they called Singhbhum. Having completed the conquest, he built a fort at Porahat and made it his capital. This name is said to have been given to the place to please the Bhuiyas, whose favourite deity is Pauri Devi.

According to tradition, the first Raja. who ruled in Singhbhum was Kashinath Singh, after whom 13 Rajas ruled in succession. The second of the line, Chatrapati Singh died leaving his wife *enceinte* and his posthumous son was named Kala (black) Arjun Singh. He was brought up under the care of the Bhuiyas, and

on attaining manhood, conquered new lands on the west of Porahat. His younger son, Madhab Pratap Singh, having been given a fief of these newly conquered lands, established himself at Anandpur. His successors are known as the Thakurs of Anandpur. The eldest son, Jagannath Singh, made some further conquests and was succeeded by his son Purushottam Singh, who extended his territories to the east, and having acquired the tract now known as Seraikela, placed it in charge of his younger son Bikram Singh, from whom are descended the Rajas of Saraikela and Kharsawan. Arjun Singh, the elder brother of Bikram Singh, succeeded to Porahat and had two sons, Amar Singh and Ajambar Singh, the former of whom succeeded his father, while the latter was given the grant of Kera. The next Raja was Jagannath Singh, who was kept in confinement by his cousin, Chakradhar Singh, and he made overtures to the British in 1767. He begged for the assistance of the East India Company, in return of which he offered to place his territory under its protection and pay an annual revenue, but his offer was not accepted. At this time, the power of the Rajas of Singhbhum seems to have declined and the tract of country acknowledging their authority was circumscribed. Kharsawan and Seraikela appear to have become independent at an early date. They were cut out of the original State and the Chief of Seraikela gradually extended his power and dominions until he became a serious rival to the head of the family.

At the same time, however, the isolation of Porahat, its rocky boundaries and sterile soil appear to have saved it from conquest either by the Mughals or the Marathas, and it remained an independent State till 1820, though the Raja was obliged to enter into an agreement with British in 1773, undertaking not to harbour fugitive rebels from British territory or to allow salt merchants to smuggle salt through his dominions, and also guaranteeing the peace of the border. In 1818, Raja Ghanasham Deo tendered his allegiance to the British Government, and his offer was accepted. The objects of the Raja in thus becoming a British feudatory were firstly to be recognised as lord paramount over the Chiefs of Seraikela and Kharsawan; secondly to regain possession of a certain tutelary image which had fallen into the hands of the former; and lastly, to obtain aid in reducing the Hos. The British Government while disallowing his claim to supremacy over his kinsmen of Seraikela and Kharsawan, exacted only a nominal tribute of Rs. 101 and undertook not to interfere in any way with the internal administration of the estate. An engagement embodying these conditions was entered into on the 1st day of February, 1820, and in 1823, the Raja regained the idol. As regards the Hos, though the Raja of Porahat had exercised no authority over them for at least 50 years, his claims were recognised; and in 1821, an expedition under Major Roughsedge succeeded in procuring their submission and a promise to pay

rent or tribute to the Raja. The rent, however, was never collected and in 1836 another expedition was sent against the Hos. After their conquest, it was decided to bring the Kolhan under direct British rule, and for this purpose, 15 *pirs* were detached from Porahat, namely, Bar, Kotgar, Jamda, Bantaria, Rengra, Gumra, Barkela, Kuldiha, Kainua, Goilkera, Chainpur, Ajodhya, Rela, Latua and Saranda. As a compensation for this loss, the Raja was given an allowance of Rs. 500 per annum.

Ghanasham Singh had been suceeded by Achuta Singh, a grandson of Jagannath Singh, who was poisoned by his cousin Chakradhar Singh when attending a ceremony at the house of the Raja of Seraikela. On the death of Chakradhar Singh, who was forced to take some poisoned *pan*, his minor son, Arjun Singh, succeeded. As he was a minor, the Government in 1839 assumed direct management of the estate. In 1845 Arjun Singh, on attaining majority, received charge of the estate, and in 1857 rebelled, after delivering up the Chaibasa, mutineers.* He eventually surrendered and in December, 1859 was sent to Banaras as a State prisoner. The Porahat estate was confiscated and out of the estate the following grants were made by Government to the following chiefs and zamindars, etc., for loyal services rendered by them during the Mutiny: (*a*) Karaikela *pargana* (without its coal *pirs* and the villages of Bhalupani and Rangrin) granted to the Raja of Seraikela rent-free in perpetuity; (*b*) the village of Bhalupani granted to Kumar Jagannath Singh, brother of the Raja of Seraikela, rent-free in perpetuity: (*c*) Rangrin village granted to Babu Pitamber Singh, another brother of the Raja of Seraikela, rent-free in perpetuity; (*d*) four villages in *pargana* Chakradharpur, namely, Setahaka, Semudiri, Dalki and Samraidi granted to the Thakur of Kharsawan rent-free in perpetuity; (*e*) Asantalia village granted to Ramchandra Pradhan rent-free for his life time (since resumed after the death of the grantee) ; (*g*) Nakti village granted to Sarinu Munda rent-free in perpetuity; and (*h*) Hatia village granted to Babu Ajoynath Singh rent-free in perpetuity. After the confiscation the estate was under the direct management of the Government till 1895. Its revenue administration was made over to the Board of Revenue in 1859, but it continued in other respects to be managed a Tributary State. It was incorporated in Bengal by a proclamation of 5th August, 1892 and was included in the Singhbhum district by Act II of 1893 (The Porahat Estate's Act). The Raja Arjun Singh, who had been in receipt of pension from the estate, died in 1890 at Banaras, leaving behind him Kumar Narpat Singh, his only son. By a deed of release, dated 10th October, 1895, Kumar Narpat Singh was granted by Government "an act of grace" the unalienated portions of the

*For further details please *see* the chapter on History in this Gazetteer and "1857 in Bihar" (Chotanagpur and Santhal Parganas) by P. C. Roy Chaudhury (1957).

original Porahat Raj. The grant was made subject and without prejudice to all existing engagements with *raiyats* and under-tenure-holders, as well as with the holders of villages of Hatia, Rajgaon and Nakti and also as regards the Bandgaon estate and subject to the settlement thereof made by Government in 1881 under which a fixed rent of Rs. 668 per annum was payable. As regards Anandpur, Kera and Hatia, it was stipulated that the Zamindars should have reversionary rights of succession on failure of male heirs of the grantees. The estate was to be held by Narpat Singh according to the custom of lineal primogeniture (the eldest male member of the eldest branch being preferred) as an inalienable and impartible revenue-free Zamindari. It was laid down therein that no portions of the estate should be mortgaged, devised or alienated, otherwise than by lease or demise for a term not exceeding 21 years. Finally it was laid down that the forests then in charge of the Forest Department should continue to be so managed by that department.

As regards the dependencies of Porahat, Anandpur and Kera which were formerly *Khorposh* or maintenance grants made by the Raja of Porahat to junior members of the family, and their holders paid quit-rents to him. These were remitted by Government after the Mutiny, and Porahat estate had no right to receive rents from or to interfere with them except that the estate had a reversionary right of succession in the event of extinction of male heirs. In the matter of succession, *Khorposh* grants were governed by custom of lineal primogeniture as the parent estate and the *Korposhdars* had no right to devise by will or to maintain succession by adoption.

After the death of Raja Narpat Singh, which took place in 1934, the estate escheated to Government. Three suits were instituted by alleged agnates claiming that the confiscation and subsequent deed of release in favour of Raja Narpat Singh were illegal and *ultra vires* and for getting possession of the estate. One of the suits, brought by the ruling chief of Seraikela State, was eventually withdrawn and two other suits were dismissed for default, orders of which were confirmed by the High Court. The Government is now administering the estate as a Government Khasmahal estate and the Forest Department is in charge and management of forest as before. Till the Zamindari abolition took place the custom of offering Dashara goat by the *thiccadars* had been retained in Anandpur and Kera estates. A goat used to be purchased by subscriptions amongst the tenants and brought by the village headman on the occasion of Dashara ceremony. The custom of offering animal sacrifice by the village headman was prevalent in Anandpur and Chainpur estates. It was connected with the worship of Pauri Mai, celebrated in all the estates except Bandgaon. The *dehuri* or priest, who was usually

a Bhuiya, used to sacrifice the goats and take the head as his perquisite while the rest of the animal used to be distributed among the villagers who had contributed. Except that in Anandpur, the Zamindar used to take one quarter at the celebrations, which in Anandpur was triennial. The sacrifice was popular and was supposed to be very efficacious.

Anandpur estate was under the management of the Court of Wards as the proprietor was a lunatic and Chainpur was also under management of the Court as its proprietor was a minor. Kera estate was under the management of Government under the provisions of Chotanagpur Encumbered Estates Act. Now all these three estates have vested in Government under Bihar Land Reforms Act.

After the merger of Seraikela and Kharsawan States in the Indian Union, the Orissa Government at first took over administration of the States. But subsequently these two States have merged in Bihar for administrative convenience.

Rogod.—Rogod is situated right inside the Reserved Forests and presents the rough and rugged beauty of nature. The place is accessible during the fair-weather and falls on the Chaibasa-Ranchi Road. The distance from Tebo to Rogod is ten miles. The forest road meanders through a very well wooded area which has a beauty of its own. There is a well furnished forest rest house at Rogod situated at the top of a hillock from where the entire valley stretching up to the Public Works Department road at Nakti with the Chakradharpur plains on the background present a beautiful sight to the visitors.

Visitors have to make their own arrangements for conveyance.

Ruam.—A village in Ghatsila police-station, situated two miles south-west of Mahulia. The area of the village according to 1951 census is 1,123 acres and its population is 268 (139 males and 129 females). The incidence of literacy of the village is poor as the census only recorded 27 souls as literate. It contains some remains, which probably mark a former settlement of the *Sravakas* or lay-Jains, though local tradition ascribes them to a Raja called Ruam, who is said to have had a fort here. There is a ridge or moat of clay, which is said to have enclosed the fort, but which now encloses and is itself enclosed by a jungle of fine trees. Close by are three old tanks and an accumulation of copper slag indicating that this must have been one of the centres of mining operations. Following the direction of the strike of the rocks, which from this point, trends to south-west and south, old workings and slag heaps can be traced for many miles further, the last being about three miles north of Kamerara on the Midnapore road.

Sadant Pir.—Sadant was a *pir* or division containing 221 villages when Seraikela was a State. It was in the direct possession of the Raja and had been assessed to a rental of Rs. 41,910.

Saranda.—A hilly tract in the extreme south-west of the district is known as Saranda. It is a mass of forest covered hills rising to a height of 3,000 feet and is frequently referred to as "Saranda of the Seven Hundred Hills". This, however, has nothing to do with the name which is probably derived from *saram* (or sambar) and *da*, that is water. It is sparsely inhabited by aboriginals. The condition of the aboriginals has changed a little due to impact of education, communication and some welfare measures. So the observation made in 1840 mentioned in the last Gazetteer when it was described as "one mass of mountains, clothed in forests, where the miserable inhabitants, few and solitary, can scarce struggle for mastery with the tigers", does not hold good. The forest area of Saranda Forest Division is 2,11,840 acres and has headquarters at Chaibasa. Saranda has great attractions for the Shikari, botanist and orinthalogist; a beauty area.

Saranda Garh.—A ruined fort in the village of Chhota Nagra, situated on the bank of the Ponga river near its junction with the Koina, 20 miles south-east from Manoharpur railway station. It is said to have been the fort of the former chiefs of Saranda, and there is a small stone image of cow among the ruins, which is worshipped by the Hindu villagers. In the jungle close by lie two big iron drums or *nagaras*, to which the villagers do obeisance whenever they pass by them. The legend is that they belonged to the chief and that he used them to call the people of Saranda to his fort.

Sasangda Plateau.—The plateau is 11 miles long along Orissa borders. The elevation is in between 2,750 to 3,050 feet. The area is a game sanctuary and has interesting fauna and flora. Elephants, bisons, *sambar*, *chital* and tigers are found in the locality. Peafowl and jungle fowl are common.

Seraikela.—This was formerly the headquarters of the former State of Seraikela. Since the creation of the new subdivision this is the subdivisional headquarters of Seraikela and Kharsawan. It has a subdivisional hospital with 22 beds, a high school, a girls' middle school, a sub-jail, a post and telegraph office and a municipal board. The population of the town, according to 1951 census figures, is 4,777. A new colony consisting of 27 Government quarters and a hostel building for 100 students of the high school has been constructed outside the perimeter of Seraikela. The new colony is at a little over a mile from the centre of the town. The Subdivisional Officer and other gazetted officers have their own quarters. The National Extension Service Block office has got its headquarters at Seraikela.

Seraikela is noted for its famous *Chhow* dance. The Seraikela Raj had greatly encouraged the development of *Chhow* dance. These dances are commonly held in the beginning of Baisakh (middle of April). It is a mask dance of a very high cultural type.

Seraikela had been an offshoot of the old kingdom of Singhbhum founded long before and referred to by George Vansittart, Resident at Midnapure in his writing to Mr. Verelst, Governor of Bengal as well as by Mr. Aitchison in his Treaty Book. It was carved out of this kingdom for the junior member of the family, Bikram Singh. The State of Kharsawan was formed by grant of a territory to one of the sons of Bikram Singh.

The correspondence shows that the British appear to have come in contact with Seraikela in 1803 but no formal treaty is said to have been entered into by the British either with Seraikela or Kharsawan. In 1803, during the Maratha wars, the Marquis of Wellesley caused a friendly communication to be addressed to the ruler of Seraikela, inviting his assistance in the War against the Marathas and assuring him that the British Government would always respect his rights and hold Seraikela tribute-free. Similar friendly communications were addressed by the next Governor-General, Lord Minto.

It is said that a *patta* and *kabuliat* as exchanged between the British Government and the ruler of Porahat on the 1st February, 1820, were also exchanged between the rulers of Seraikela and the British. No such document is, however, traceable. Hence the relation between the ruler of Seraikela and the British Government was regulated by the *khairiat* of Lord Wellesley in 1803 and those of Lord Minto in 1808, supplemented later on by *sanads* of 1899 and 1919.

The States of Seraikela and Kharsawan were administered by the British through the Agent to the Governor-General, South-Western Frontier Agencies, from 1833 to 1854, when the South-Western Agency was transferred to the Commissionership of Chotanagpur. The exact terms of relationship of the British with these two States were not known. It is known from Wood's despatch that the British interfered in the internal administration of these territories whenever they so liked. The chiefs were permitted to exercise such powers as considered best by the political officers.

When these two States were placed under the Commissionership of Chotanagpur, their relationship was conducted through the Deputy Commissioner, who was *ex officio* Political Agent for the States till 1916. In the meanwhile, in order to define the status and position of these two States, Lord Curzon granted *sanads* to them in 1899, specimen copies of which will be found in Aitchison's Treaty Book, Part III, page 367. By these *sanads* the criminal

powers of the rulers were restricted to two years and to a fine of Rs. 1,000 and the Commissioner of Chotanagpur Division was appointed to give them advice on all important matters of administration, the settlement and collection of land revenue, the imposition of taxes, the administration of justice, arrangements connected with excise, salt and opium, the concessions of mining, forest and other rights. Disputes arising out of any such concessions and disputes in which States were concerned, were regarded as specially important matters, in respect of which they must at all times were to conform to such advice as the Commissioner might give. They were also required to deliver up any offender from British or other territory who might take refuge in the State and to aid British officers pursuing criminals into his territory. The payment of *najranas* was abolished and revised *sanad* was granted to these Chiefs also as in the case of other States. Unlike other Chiefs, they did not pay tribute, though they were on occasions called upon to provide contingent of troops to aid in suppressing disturbances.

In 1905, all the states of the Commissionership were transferred either to Orissa Commissionership or Central Provinces except Seraikela and Kharsawan which continued to be administered by the Commissioner of Chotanagpur Division through the Deputy Commissioner of Singhbhum as *ex officio* Political Agent till 1916, when the Political Agent, Orissa States at Sambalpur, became the Political Agent for these two Chotanagpur States also. In terms of the *sanad,* the Commissioner of Chotanagpur Division continued to exercise the control as before till the Political Agent, Orissa and Chotanagpur States, was invested with the powers to exercise the function of the Commissioner in respect of both the Orissa and Chotanagpur States in 1922. The Political Agent at Sambalpur was designated as Political Agent and Commissioner for Orissa and Chotanagpur States. The powers of the ruler were extended in the exercise of criminal jurisdiction to all cases including murder, etc., subject to confirmation of death sentences by the Political Agent and the Commissioner.

With effect from 1st April, 1933, prior to the introduction of Provincial autonomy, the States formerly in relation with the Governments of Bengal, Bihar and Orissa and Central Provinces excepting Makrai which was included in the Bhopal Political Agency in Central India were placed in direct relation with the Government of India through the Agent to the Governor-General, Eastern States with headquarters at Ranchi. The restrictive clauses of the *sanad* of Seraikela were abrogated and placed directly under the Agent to the Governor-General. The relationship of Kharsawan along with other smaller States of Orissa and Central Provinces continued to be conducted through the Secretary to the Agent to the Governor-General and Political Agent at Sambalpur.

In 1936 revised *sanads* were granted to all the States and as a result, Seraikela enjoyed full powers of internal administration and was admitted to the Chamber of Princes as a member in his own right in 1940-41.* The Kharsawan *sanad* was also revised but some restrictions remained attached to the *sanad* and Kharsawan was treated as a Class 'B' State and the ruler was not admitted to the Chamber of Princes.

For administrative conveniences and after the post of the Agent to the Governor-General was transformed to that of a Resident, the following posts of Political Agents were formed :—

(1) Political Agent, Chhattisgarh States with headquarters at Raipur.

(2) Political Agent, Orissa States with headquarters at Sambalpur.

(3) Political Agent, Bengal States with headquarters at Calcutta.

The relationship of Seraikela and Kharsawan continued to be conducted through the Political Agent at Sambalpur. The ruler of Seraikela continued to remain as a Class I Indian State. With the advice of His Excellency the Crown Representative, Judicial reform was introduced in these States when a High Court at Raigarh was established.

For all the States, except Tripura and Cooch Behar, a joint police force was established. The expenses of the common organisation was being met from a common fund through a Board of Control.

The political changes in what was then called British India had already begun to move the people of the States also. The mal-administration consequent upon the financial breakdown of the Seraikela State, had created the necessary background for agitation against the ruler. The fear of repression by the ruler under the protective hands of the paramount British powers had, however, kept the people off from any open movement, but the fire was already smouldering below the surface. By the middle of 1946, the agitation and progress in India had its effect on these States. The people of these two small States could no longer keep silent and the agitation of *Prajamandals* began. The ruler of Kharsawan conceded part of the demand of the *Prajamandal* on the 14th November, 1947. They were, however, contemplating open revolt by organising parallel Government when the States were integrated with India. This integration was done in pursuance of the States Ministry's policy of the merger of the small inviolable States either into union of small States or with the adjacent Provinces. At first they were handed over to the Government of Orissa on the

*Seraikela is the only State in this group that was given this privilege (P. C. R. C.).

assumption that they belonged to the group of Orissa States. On the 18th December, 1947, officers of Orissa Government came to Seraikela and Kharsawan with 3 companies of armed police. On the 1st January, 1948, there were mass public meetings at Seraikela and Kharsawan to register a protest against the merger of the States with Orissa. There was a firing at Kharsawan and a strong movement started for convincing the Central Government to transfer the two States to Bihar, of which these were claimed to be integral parts. Ultimately on the 18th May 1948, the two States were merged into Bihar. Subsequently, this merger was confirmed by a Government notification (India) on the 27th July, 1949, and ever since then the former two States, which were constituted into a subdivision and named as the Seraikela-Kharsawan Subdivision within the district of Singhbhum, has been a part of Bihar.

Serengda.—Serengda is situated on the left bank of the river South Koel at a short distance from the point where the South Karo joins the latter. The nearest railway station is Goilkera from where the visitors have to make their own arrangements for conveyance. The distance between Goilkera and Serengda is 17 miles. There is a good fair-weather forest road from Goilkera to Serengda. There is a second class forest rest house at Serengda.

Sini.—Sini, the nearest railway station for Seraikela (8 miles), is an important railway station on the main line of the South-Eastern Railway from Howrah to Nagpur. It is also a junction between the main line and the Sini-Adra line. The importance of this place has increased on account of the Raiway Workshop which employs nearly 500 workers and the Railway Training School which trains signallers, guards and others. Both these institutions are expanding and are likely to increase the importance of this place in future. As a railway centre Sini has a future.

Tatanagar.—Tatanagar is an important junction of the main line of the South-Eastern Railway, situated 18 miles east of Sini and 153 miles from Calcutta. Formerly the name of the station was Kalimati, but now it is called Tatanagar after the name of J.D.Tata, the founder of Jamshedpur Steel Factory, to perpetuate his memory. Tatanagar has gained great importance due to Tata Iron and Steel Factory and other works. The traffic in goods and passengers is very heavy. (For details please see "Jamshedpur" and "Means of Communication".)

Tholkobad.—There is a forest road from Gua to Tholkobad which is, however, closed in the rains. The place is motorable right from Chaibasa *via* Jamda and the distance is about 73 miles. There is an excellent forest rest house and the place is quite cool even in the hottest part of the year due to the fact that it is surrounded by the forests. It is a beauty spot and has great attractions for the lover of nature, birds, trees and animals. It could be developed into a centre for tourism.

ENCLOSURES

ENCLOSURE I.

RENTS, WAGES AND PRICES

(**Reprinted from the last District Gazetteer*, 1906.)

RENTS.

Kolhan.

In 1837, when the Kolhan was first brought under British rule, the Hos were assessed according to their ploughs and plough-cattle. The basis of the assessment was eight annas per *hal* or plough, which practically meant that each cultivator paid that sum for every pair of plough-cattle. The plough tax continued till 1867, when the Deputy Commissioner, Dr. Hayes, made a regular measurement and assessment of land. At this settlement the embanked rice lands, called *bad* and *bera*, were measured and settled, but the unembanked uplands, called *gora*, were not assessed, and the tenants were allowed to bring new lands under cultivation without payment of rent during the 30 years for which the settlement was concluded. On its expiry in 1897 the *gora* lands were assessed to rent for the first time.

The system of assessing only rice lands which had hitherto prevailed originated in the peculiar conditions of agriculture in this tract. To quote from the Government resolution reviewing the settlement of 1897:—"The system is curious for this reason, that, in order to render the land fit for the cultivation of rice, the tenant has to embank it at his own expense, so as to retain water for irrigating the rice, and, having reclaimed it from jungle and embanked it, he has to pay rent for it; at the same time he may, without payment of rent, cultivate as much upland as he pleases with crops that do not require so much irrigating and need no embanking and little or no outlay on his part. The apparent anomaly is probably due to the facts (1) that the area of land which can be terraced or embanked and rendered fit for rice cultivation in such regions is limited: (2) that, when a man has terraced or embanked a particular plot, it becomes more valuable than unembanked land, and, if he does not pay rent for and so secure an occupancy right in it, somebody else will offer rent to the landlord, who will oust the original reclaimer of the soil and let the land to another; and (3) that it pays the landlord to encourage reclamation and embankment of such lands, and consequent permanent cultivation, by giving the tenant, who thus incurs an outlay on embankments, the right to cultivate upland or unembanked land free of rent. The right to cultivate

*This text is reproduced from the old Gazetteer and has its value. The text indicates the remarkable changes covered in various chapters of the book (P. C.R.C).

uplands free of rent is, in fact, an incident of the holding of the embanked land at a certain rent. It is part of the consideration for which the tenant reclaims the jungle, turns it into rice lands, and incurs an outlay of labour and money in rendering it fit for profitable cultivation of rice. The system is not, therefore, so unreasonable as it seems at first sight."

It had, however, been the policy of Government for some time past to get rid of this system gradually without exciting discontent and opposition; and in the Kolhan circumstances justified the change. So long as the *ryots* were few in number, and the lands were plentiful, the *ryot* had no difficulty in finding *gora* lands to cultivate; but the increase in population and competition for land had brought about a change, and the system of shifting *gora* cultivation had disappeared. These lands had for many years past been occupied continuously by the cultivators, the best lands being in the possession of the *mundas* and their relatives and friends, who claimed a right of occupancy in them to the exclusion of the poorer *ryots*. The cultivators themselves were in favour of a light assessment of the *gora* lands rather than of an increase in the rate on rice lands. Such an assessment, moreover, was more equitable than an enhancement of the latter, because there was a large class of *ryots* cultivating only *gora* land, who were paying no rent. It did not seem fair that the latter should be permitted to hold their land free of rent, while those cultivating the *bera* and *bad* lands bore the brunt of the enhancement.

Eventually, it was decided that the old rate on rice lands of 6½ annas per local *bigha* of 2,500 square yards (i. e. Rs. 2 per *hal* of 12,500 square yards) should be allowed to continue, and that a nominal rate of one anna per local *bigha* (approximately 2 annas an acre) should be imposed for the first time on *gora* lands. Also, in order to discourage the settlement of foreigners in the estate, the lands of those foreigners who had settled in the Kolhan subsequent to the last settlement were assessed at double the ordinary rates, and those foreigners who had settled as non-cultivators were charged at the rates of Re. 1 per *bigha* on their homesteads. Hos hold their homesteads free of rent.

The following is a statement of the different rates fixed :— (1) For *bera* or first class rice land and *bad* or second class rice lands occupied by Ho tenants and recorded foreigners, 6½ annas per local *bigha*. (2) For *gora* or unembanked uplands occupied by Ho tenants and recorded foreigners, one anna per local *bigha*. (3) For *bera* and *bad* lands held by new foreigners not recorded at the last settlement, 13 annas per local *bigha*, or double the existing rate. (4) For *gora* lands held by such foreigners, 2 annas per local *bigha*, or double the rate for Ho tenants and recorded foreigners. (5) For homesteads occupied by non-cultivating

foreigners, Re. 1 per local *bigha*. (6) For lands occupied by cooly depots, Rs. 2 per local *bigha*.

The result of the settlement was that the gross rental was raised from Rs. 64,828 to Rs. 1,77,300 including Rs. 49,772 due from the *ryots* as commission to *mankis*, *mundas* and *tahsildars* or village accountants. The total increase in the rental was Rs. 1,12,471 of which Rs. 88,388 were due to extension of cultivation of *bad* and *bera* lands, Rs. 17,080 to assessment of *gora* lands, Rs. 6,536 to enhancement of the rents of new foreigners, and Rs. 465 to the assessment of homesteads in the occupation of foreigners. The increase amounted to no less than 173.5 per cent and is *prima facie* very large. It was obtained, however, without any enhancement of the rents on rice lands in spite of the lapse of 30 years and in spite of prices having risen by 100 per cent in that time. Moreover, if we exclude the enhancement of Rs. 7,000 derived from the prohibitory rates on foreigners, it corresponds with the increase in the population and cultivation, and very nearly with the increase in the number of holdings. The all round incidence of rent works out at annas 4—4½ per local *bigha* or annas 8—5½ per acre.

Porahat.

In the Porahat estate a settlement of rents for 15 years was made at the settlement concluded in 1903. The main principles of the settlement were that in Khas Porahat, Kera and Bandgaon the existing rates of rent should not be enhanced and that there should be one uniform rate for all classes of embanked lands. With regard to *gora* or uplands, it was decided that they should be assessed to rental for the first time at the rate of one anna per *bigha* in the Sadant *Pirs* and half an anna per *bigha* in the Kolhan *Pirs*. In Chainpur there had been a settlement in 1886-87 by which embanked lands were divided into three classes, *bera*, *nali* and *bad*, which were assessed at different rates. At the new settlement it was decided that the rates should be raised for *nali* from 14 annas to Re. 1 and for *bad* from 9 annas to 12 annas a *bigha*. In Anandpur, where there had never been a proper settlement, it was decided to classify the lands. The embanked lands were, accordingly, classified, as in Chainpur, into *bera*, *nali* and *bad;* while *gora* was subdivided into hill *gora* and ordinary *gora* situated on the level. The following rates per acre were fixed for the different classes :—*bera* Re. 1-2-4, *nali* annas 13-4, *bad* annas 8-4, *gora* 1 anna, and hill *gora* 6 pies. Altogether, rents were settled for 23,135 tenants situated in 658 villages. In 20 villages rents were not settled, viz., Goilkera bazar (a new village formed at this settlement containing only *basauri* or non-agricultural tenants) and 19 villages in Anandpur for which the clearing leases had not yet lapsed.

The average rates per acre settled for the *ryoti* lands throughout the estate are shown in the marginal table. The net result was an increase in the rental of Rs. 25,631 during the first five years and Rs. 33,826 for the remainder of the settlement, except in the case of the subordinate tenure of Anandpur, where there will be a further increase of Rs. 1,426 from the eleventh year. The percentage of increase varies from 28 to 69 in the first five years and from 35 to 124 for the remaining period, except in Anandpur, where from the eleventh year the increase will be 167 per cent. The enhancement seems high, but the incidence of the settled rent, as shown above, is light, and concessions were made to prevent any cases of hardships.

	Rs.	a.	p.
Sadant Pir ..	0	15	2
Kolhan Pir ..	0	2	5
Average ..	0	6	10
Khas Porahat.			
Kera ..	1	1	2
Chainpur .	1	3	2
Bandgaon ..	0	7	8
Anandpur ..	0	6	4
Kharsawan ..	1	3	9
Average ..	0	8	7

Dhalbhum.

The Dhalbhum* *pargana*, with an area of 1,187 square miles, contains 16 *tarafs*, in nine of which (known as the *nagad mahal*) cash rents are paid, while produce rents obtain in the remaining seven, which are known as the *kar mahal*; the different *tarafs* contained in each *mahal* are shown in the margin. The number of villages in the whole *pargana*, as recently ascertained by survey, is 1,686, including jungle and river blocks, which have been treated as separate village units for the purpose of the survey. The number of villages in which the *kar* system prevails is about 300, and there are about 250 villages in the *kar mahal* in which rent is also paid in cash. In the *nagad mahal* villages also, there are many cases in which the *kar* system, in the shape of *adhabhagi* or *sanja* (division of produce), has been adopted, mostly at a comparatively recent date.

Nagad Mahal.	*Kar Mahal.*
Baharagora ..	Dampara
Paralia ..	Kokpara
Purihati ..	Paora
Banghaghra .	Mahulia
Pambanki ..	Kalikapur
Pairagini ..	Metiabandi
Asanbani ..	..
Dighasai ..	Atkoshi
Haludpukur ..	..

The old unit of land measure in Dhalbhum is the *hal*, which is taken as equivalent to 16 annas of land, one anna again being equal to four pice of land. It is an indeterminate standard, for it means as much rice land as can be cultivated with a pair of bullocks in a year, e. g., a strong man with a strong pair of bullocks would plough more than an ordinary man with a pair of milch cows. Disputes about the area of the *hal* have consequently been not infrequent. It has, for instance, been claimed that a *hal*

* This account of rents in Dhalbhum has been prepared from a note contributed by Babu Rajani Kanta Sen, Assistant Settlement Officer.

contains only 12 Dhalbhum *bighas* (explained below), but the settlement papers of 1868 and 1881 show that its size varies considerably even in the same village; while cases have come to light of a *hal* containing as much as 90 local *bighas*, and in 1884, during the settlement of the *ghatwali* lands, it was taken as equivalent to 40 Dhalbhum *bighas*.

The system of measurement by *bighas*, *kathas* and *gandas* was introduced for the first time by Raja Chitreswar Dhal in 1861. One *bigha* was taken to be the square of a rope measuring 90 cubits or 45 yards, and was, therefore, equivalent to 2,025 square yards or 0.418 acres; by this standard an acre of land measures 2 local *bighas*, 7 *kathas* and 16 *dhurs*. Small pieces of land were measured by a rod or rope one *katha* or 4½ cubits long (the square of which gives an area of one *ganda* or *dhur*), and the table adopted was 20 gandas=1 *katha*, 20 *kathas*=1 bigha. This *bigha* unit was restricted to the *nagad mahal* villages and to those villages of *kar mahal* in which cash rents had been partly introduced. The system is defective, for the rope, which is made of *sabai* grass, can be stretched. There is moreover no fixed standard for the *katha* of 4½ cubits, for its length depends mainly on the length of the forearm (*hath*) (from the elbow to the end of the middle finger) of the person who actually measures the rod or rope.

For the purpose of assessment the lands in the *nagad mahal* were divided into seven various classes according to the productive power of the soil and the crops grown, of which three were lands growing *aghani* crops, viz., *awal bahal, doem kanali* and *awal kanali;* and four were lands growing *bhadoi* crops, viz., *doem kanali, awal bad, doem bad* and *soem bad*. These classes were those generally recognized by the people, and disputes about them were settled by a *panchayat* appointed by the *pradhan* and tenants. During the settlement of the *pargana* in 1881, when it was under Court of Wards management, the marginal rates per local *bigha* were fixed with the sanction of the Board of Revenue. The *gora* or uplands were left unassessed in order to encourage the extension of cultivation. The Board of Revenue also sanctioned the following rates per *bigha* for the assessment of the *kar mahal* villages, viz., *awal bahal*, 12 annas; *doem bahal*, 8 annas; *awal bad*, 6 annas; and *doem bad*, 4 annas. It was, however, found that to assess the *kar mahal* villages at these rates would lead to too violent an enhancement, and finally their rental was amicably fixed at a

Class.	Rs.	a.
Awal bahal ..	1	0
Awal Kanali ..	0	14
Doem bahal ..	0	12
Doem Kanali ..	0	10
Awal bad ..	0	10
Doem bad ..	0	8
Soem bad ..	0	6
Badha ..	1	0
Bastu	1	0
Udhastu ..	0	12

rate of 25 per cent in excess of the amount previously paid without reference to measurement. The term of this last settlement expired in 1897, when the estate was under the management of the Encumbered Estates Department. Proposals for the resettlement of the *kar mahal* villages were then made, but the scheme had to be abandoned owing to the release of the estate in 1900. The old rates for the various classes of lands still prevail in the *nagad mahal* villages, but in a few cases they have been altered by speculative *mahajans* or other petty landlords. In some villages, too, where the rates have been left intact, the classification of land has been changed in order to obtain higher rates, and *gora* lands have been assessed at rates varying from 2 annas to 4 annas per *bigha*.

The *kar* or produce rent is measured by *pailas* or *pais*, i. e., wooden vessels used for measuring rice or *dhan*. The *paila* measures are—16 *pailas*=1 *kuri* ; 16 *kuris*=1 *ara*. The *pai* measures are—8 *pais*=1 *kuri*; 16 *kuris*=1 *ara*. The amount of produce paid varies from village to village, but the most common rate is one *ara* of rice per *hal* with the following subdivisions—1 *kuri* or 8 *pais* for one anna of land, and 2 *pais* or 4 *pailas* for one pice of land. In the *nagad mahal* villages there is no fixed rate, but the following are the amounts of *dhan* paid per *bigha* in a few selected villages—1 *ara* for *awal bahal*, 14 *kuris* for *kanali*, 12 *kuris* for *doem bahal*, 10 *kuris* for *awal bad* and 8 *kuris* for *doem bad*. The value of the *ara* varies in different *tarafs* according to the value of the *pai* and *paila*; in the *kar mahal* villages the most common standard is that known as the *karua pai*, as shown in the margin. The *pai* is being gradually replaced in many parts by the *chalan pai* or the standard *paila* of 80 *tolas* weight. In some places the parties have found it more convenient to pay *dhan* instead of rice, at a rate of 40 maunds of paddy in lieu of 19 maunds, 8 seers of rice.

Rice.

1 *paila*	—3 standard seers.
2 *pailas*	—1 *pai*.
8 *pais*	—1 *kuri*.
16 *kuris*	—1 *ara*.
1 *ara*	—768 seers, or 19 maunds 8 seers.

Dhan.

1 *pai*	—4 seers, 12 chittacks (standard weight).
8 *pais*	—1 *kuri*
16 *kuris*	—1 *ara*.
1 *ara*	—608 seers, or 15 maunds 8 seers.

There some are interesting references to this system in old correspondence. From a letter, dated 26th October, 1853, from Lieutenant Graham to the Agent to the Governor-General it appears that the *pradhans* were in the habit of paying rent to the Raja at the rate of one *ara* or about 8 maunds of rice per *hal*. A *tahsildar* was deputed to collect some arrears, and there was a dispute about the amount to be paid. The Raja demanded Rs. 10-10 in exchange for one *ara*, while the *pradhans* wanted to pay at the rate of

2 maunds per rupee or Rs. 4 per *hal*. Lieutenant Graham fixed the rate per *hal* at Rs. 6 and suggested Rs. 7 in case of an appeal by the Raja. In this letter it was observed that although the amount which the *pradhans* paid to the Raja was nominally 8 maunds, it was in reality much nearer to 20 maunds, as the *paila* of the Raja weighed 198 *tolas*, or almost 2½ times as much as the authorized Government seer. The Court ruled, however, that the Raja was allowed only 30 of these *pailas* to the maund, thus reducing the amount paid to him to about 15 maunds. In another case we find that the Assistant Agent to the Governor General ordered in August, 1852 the Raja to realize rent at the rate of Rs. 4 per *ara* as in previous years. From a judgment of the Judicial Commissioner of Chotanagpur in 1889 it appears that the present measure of an *ara* was formerly unknown, and that it used to be measured by a much smaller *paila* (about half its size) now known as *kali-paila*, which contains one seer 9 *chittacks* of rice.

Cash rents are generally paid in four instalments, viz., 4 annas per rupee of rent in Aswin, 8 annas in Aghan, 2 annas in Magh and 2 annas in Chait. Rents in kind are payable in the months of Aghan and Paus, evidently to suit the convenience of the tenants who get the full benefit of the year's harvest by this time. If they are not paid in these two months, the value has to be paid at the market price prevailing on the subsequent date of payment. This is the old custom, but the payment of produce rents has been practically stopped since the estate came, in the time of Raja Ramchandra Dhal, under the management of the Court of Wards and after that of the Encumbered Estates Department. Since then it has been the practice to fix a cash rate for the *ara* of rice or *dhan* at the beginning of the agricultural year, after a careful consideration of its market value; the *tahsildars* and *pradhans* are then directed to realize at the rate fixed. The latter is lower than the ordinary bazar rates, presumably in order to make some allowance for the trouble of selling the produce in the markets and for unforeseen contingencies.

It is reported that tenants whose lands were measured and assessed to cash rents in 1881 are still paying only about Rs. 12 for one *hal* of land, while a tenant who has continued to pay his rent in kind has now to pay a rent of the value of Rs. 60, or five times as much for the same class and quantity of land with similar advantages. These figures are significant of the rise in the value of produce, and it is not surprising that during the present settlement applications have been filed in almost every village for the commutation of produce rents under section 61 of Chotanagpur Tenancy Act.

Rakumats and abwabs.

Besides rent the *ryots* render a few *rakumats* (periodical services) or *abwabs* (cesses). The common *abwabs* are :—(1) *Sunia*

salami, i. e., a rupee payable to the Raja on the first day of the agricultural year; (2) *garh patnaiki*, and (3) *taraf patnaiki*, payable to the servants of the Raja; these charges are falling into disuse; (4) *boda* (goat), (5) *bhera* (sheep), (6) *bakri kari* (cash) for sacrifices to the goddess Rankini at Ghatsila, (7) *nagad siki* or a four-anna bit to be paid to the Brahman who offers the sacrifices; (8) *Manasa ghi;* (9) *Syama taila*, and (10) *Bhairab chaul* for sacrifices and for use during the Diwali Puja, etc., and (11) *ghoradana* and *biri*, i. e., gram, etc., for the Raja's horses. The above items are payable by almost all the *pradhans* (*ghatwali* and ordinary), the tenants only contributing towards the cost of the *boda*, *bhera* and *ghi* at a rate varying from 3 pies to one anna on the rupee of rent paid by each. The intermediate tenure-holders have also to pay for *boda* or *bhera* and for *ghi*.

Bethbegari.

Bethbegari (free labour) is uncommon in Dhalbhum and is restricted chiefly to services rendered in constructing or repairing the houses and *mal kachahris* of the proprietor at different centres. In the *kar mahal* villages all such services have been commuted to a cash payment of Rs. 2 per *hal* of land, called *bether kshati*. In the *nagad mahal* also *bethbegari* is found only in rare cases; in the *khas* and *pradhani* villages the services were commuted when the estate was managed by the Encumbered Estates Department and a rate fixed for each *pradhani* tenancy; this was mainly done in the villages of the Banghaghra *taraf*. There are a very few villages with petty landlords of Brahman or Mandal class, where services are taken from the tenants at the time of ploughing, digging, transplanting, threshing, stacking granaries, etc. In the *kar mahal* villages, in addition to the produce rent, the commuted value of services, and the *bether kshati* mentioned above, a cash rent called *tauzi* is realized at the rate of Rs. 2 per *hal*, besides *batta* at the rate of Re. 1 per *hal*, and *bastu-kar* or rent for homestead lands at the rate of 4 annas to 6½ annas per house.

PRICES.

The marginal table shows in seers and *chittacks* per rupee the annual averages of the prices of staple food-grains and salt for the decade 1896—1905 and for the last two years. The rise of prices in recent years has been noticed throughout Bengal, and is not peculiar to Singhbhum.

	1896—1900		1901—05		1906-07		1907-08	
	Sr.	Ch.	Sr.	Ch.	Sr.	Ch.	Sr.	Ch.
Common rice	14	6	13	12	0	8	7	9
Wheat ..	10	1	11	3	11	0	8	12
Gram ..	10	7	12	3	11	0	9	6
Maize ..	15	2	22	5	20	0	13	0

WAGES.

The marginal table shows the daily wages paid for different classes of labour in the last fortnight of March in the years mentioned. It should be added that superior artisans are very scarce in the district, and that the Forest Department contractors, i.e., purchasers of timber, cannot get labour for less than 4 annas a day, the official rates being 3 annas for departmental work. The Hos do not employ carpenters or blacksmiths, but themselves do any rough joinery or smithy-work that may be required. It is also a general custom to pay agricultural labourers in kind, e.g., so many seers of paddy and so many pots of rice-beer per diem. Thus, a ploughman, if he provides his own plough and oxen, is usually given his daily wages in paddy and, whether he is paid in cash or kind, an allowance of *handia* liquor in addition to his wages. Frequently, however, he is a farm servant living in the cultivator's house like one of the family; in such cases, he is given wages in kind at harvest time besides a certain amount of clothing.

	1895	1905	1909
	As. p.	As. p.	As. p.
Superior manson	10 0 to 12 0	12 0	12 0
Common manson	6 0 to 8 0	6 0	6 0
Superior carpenter	10 0 to 12 0	12 0	12 0
Common carpenter	6 0 to 8 0	6 0	8 0
Superior blacksmith	10 0 to 12 0	12 0	12 0
Male (adult) cooly	2 0 to 3 0	2 0	3 0
Female (adult) cooly	1 6 to 2 0	1 0 to 2 0	2 0

Supply of Labour.

Regarding the supply of labour Mr. Foley writes as follows in his *Report on Labour in Bengal* (1906) :—"The Hos, who number 2,32,743 live mostly in the Kolhan in the west of the district : they are well off, have land at extremely cheap rates, and there is plenty of cultivable land for them to take up. There is no reason why they should migrate, and it would probably be difficult to induce them, as they have no love of making money. The east of the district, Dhalbhum, is populated mostly by Santals, Bhumij and Kurmis, and is similar to the southern part of Manbhum, only it is more sparsely populated. It would probably be more difficult to obtain miners from Dhalbhum than from the south of Manbhum. Singhbhum is not to be recommended as a field of recruitment for any industry." It may be added, however, that the location of the Tata Iron and Steel Works at Kalimati seems certain to increase the local demand for labour. At present, some of the Duars tea gardens have a connection in the district,

but though there is a field for emigration, there are comparatively few emigrants, for the population is sparse, land is cheap, and the people are fairly well off according to their standard.

MATERIAL CONDITION.

Kolhan.

All accounts agree in attesting an almost unique advance in the standard of civilization and material comfort of the people of the Kolhan during the last half century. Writing in 1864, the Deputy Commissioner, Dr. Hayes, reported :—"I shall briefly state what improvements the Kols have made under our rule. We have not very far to look back when wheat, the different kinds of oil-seeds, and some of the most common necessaries of life were un-known in this district. The staple food of the Kol was rice and salt, and *dal* was a luxury; and even with this scanty food he observed a certain amount of economy, as, for instance, the grain of the rice was the morning meal, and the *conjee* furnished him his beer in the evening. Comparing a Kol of the past with one of the present day, I must make bold to differ entirely with all my predecessors, and with Mr. Ricketts, as, I think, we have civilized him a good deal. He has improved vastly in his cultivation though there is much room yet for improvement. The aversion to dealing with the "seeds" is very much less, and a number of *mahajans* annually visit the country, and take away oil and other seeds and jungle products at a value certainly 100 per cent more than existed a few years back." Nine years later, Captain Garbett described the Kol villages as "perfect picture of comfort and prettiness," adding that " the brisk attendance and business done at markets, the increasing use of brass instead of earthen utensils, the more common wearing by the women of a better description of *sari*, and a dozen other indications, in themselves perhaps slight but important in the aggregate, all attest the growing progressive prosperity of the people." Again in 1888 the Deputy Commissioner, Mr. Renny, declared :—"The Kols of the present day are as prosperous a people as there are to be found in India. Their material condition has improved to a marvellous extent within the past ten years. They are well fed, well clothed and well housed, and as happy as the day is long."

In the latter year there was a special enquiry into the material condition of the people, the results of which were reported as follows by the Deputy commissioner, who taking the holdings of 20 *ryots* at random, found that on the average each was a little less than 12 acres. "From enquiries made by me, I learnt that the average yield of an acre of rice land is 25 maunds and 30 seers, and that the average value of the produce per acre is Rs. 17, at the rate of 1½ maunds per rupee. From the above

figures it will be found that a *ryot* receives from his rice lands alone, on an average, Rs. 204 per annum. This by itself is no mean income, and when you add to it the profits derived from the crops sown on the uplands, such as oil-seeds, pulses, millets, etc., and take into account the large quantity of edible fruits, flowers and roots the forest provide free of cost, I think I may safely say that the agriculturist in the Kolhan is a prosperous man. These remarks apply to all classes who inhabit the Kolhan but with greater force to the aboriginal tribes, who, in addition to large and productive tenures and a light assessment, enjoy the privilege of brewing their own ale without taxation. Money not being very plentiful in the Kolhan, it is not easy to compute what proportion of their produce the *ryots* convert into hard cash. Here barter is the custom. The clothes they wear, their livestock, consisting of pigs, sheep, goats, pigeons, etc., and even plough cattle, are acquired by barter. Beyond lots of good food, the people indulge in few luxuries. Their rice-beer, to which they are very partial, they brew themselves; they grow their own tobacco; their clothing, scanty by choice and not of necessity, is spun in the village, and is preferred by them to imported goods; they despise gold and silver, and prefer ornaments made of brass bell-metal. Their houses are substantially built, and bear the appearance of being proof against sun, wind and rain, and they are gradually substituting metal for earthen utensils."

Dr. Manook, who had been long in the district and was intimately acquainted with its conditions, similarly wrote :—"The cultivators, i. e., those who live upon the produce of their land, are the best off. Among the Kols of this class especially, the men are well nourished and physically strong, the women sleek and well dressed, and the children well fed and taken care of, Their houses are of better class, their clothes made of better stuff, and their household utensils of brass and metal. This class supplements its income from cultivation by rearing cocoons, and this aids them in paying their rents and putting by something for the purchase of cattle and other necessary articles. Next to these come the artisans, the weavers, brass-workers and blacksmiths who form the majority of the artisan class in the district. The physical condition of this class is also good. The brass-workers are the best off among them, for their handicraft fetches high value; next the weavers, who can earn easily one to three rupees a week. The village blacksmith class is some-what poorer, but he is not poverty-striken. He earns sufficient to keep himself in physically good condition for his hard work. Of the labouring classes, the purely agricultural labourer is the worst off, but not so badly off as to affect his physical conditions for want of food. He is poor, his house is small, and it is among his class that the brass and metal utensils have not replaced the earthenware vessels; and his clothing is of the scantiest."

The prosperous condition of the people in this part of the district may fairly be attributed to certainty of tenure, freedom from agrarian disputes, and low rates of rent; but the extension of roads, the development of new sources of industrial wealth, such as the trade in tusser silk, the cultivation of new crops, and the gradual spread of education, have also been factors in the general progress. There is a reverse side, however, to this bright picture. The Ho is improvident; he lives only for the present; and he spends practically all that he gets and never troubles to save. He and his family, moreover, drink an astonishing amount of *handia* or rice-beer (called in Ho *deang* or *illi*), women and children even drinking it. There is always a supply ready in the house of every one who can afford it, and it is estimated that a quarter of the rice produced in the Kolhan is used for brewing it. The habit of drinking of this liquor does not, as a rule, lead to drunkenness, but it causes a good deal of waste, especially during festivals such as the Maghi. On the other hand, the needs of the Hos are small. Earthen pots and dried hollow gourds have for generations past been his only household utensils, and those who are well-to-do are content with two meals daily (at noon and at night), consisting merely of boiled rice and *dal*, *sak* or vegetables. The poorer classes cook their food once a day in the evening, keeping some over for the midday meal, and eke out their scanty fare by edible jungle products.

Perhaps, however, a clearer idea of the economic condition of the people can be gathered from the figures obtained at the last settlement showing the average area cultivated by each *ryot*. He has a holding of 4.2 acres, consisting of 1.8 acre of *bera* land, 0.8 acre of *bad* and 1.8 acre of *gora*. If he grows rice on the whole of this, the outturn will be 25.2, 13.2 and 16.2 maunds respectively—in all, 54.6 maunds. Deducting 9 maunds for seed, he has about 45 maunds of rice for a family of 5 persons; and if rice sells even as low as Rs. 2 a maund, he will have Rs. 90 for their support.

Porahat.

The material condition of the people in the Porahat estate is described as follows by the Settlement Officer Mr. J. A. Craven—"I think there can be no doubt on the whole that the material condition of the people is satisfactory. Poverty is with us everywhere, but the general absence of beggars, except in the bazars, is remarkable. The Kols seem to succumb rapidly to disease, and their average life must be short. At the same time, rents are low, crops are good, and markets are in many parts good and accessible. The *Dikkus* are generally well off, and there is no reason why the Kol should not be equally so, were he only more thrifty and careful in his cultivation, and less addicted to observing so religiously his too numerous *parabs* or days of

festivity-*cum*-religion :—a small modicum of the latter, by the way, to an unconscionable amount of the former. The sacrificial offerings to *Bongas* and departed spirits are perhaps almost as common as ever, and if theft is not so frequent as before in order to provide a sacrifice, the Kols frequently run into debt to obtain it. I have found good fields, mortgaged for a goat required for a sacrifice, remaining unredeemed for over ten years in the hands of the mortgagee on account of the poverty or apathy of the mortgagor. In any case, we may safely say the Kol has considerably improved, and though he lags somewhat sadly in the rear in the race of evolution, he has had much headway to make up."

Dhalbhum.

The only detailed information available regarding the material condition of the people in Dhalbhum is contained in a report submitted by the Manager in 1888, in which he summarized the result of special inquiries on the subject as follows :—

"The condition of the people engaged exclusively in agriculture may be said to vary according to the area of land cultivated by each family. The larger the size of the *ryot*'s holding, the greater is the margin of profits available for the maintenance of his family; and as the number of persons dependent on a well-to-do *ryot* cultivating a large holding is not larger, in proportion to his profits, than the number dependent on a poorer *ryot* cultivating a smaller holding, the former are far better off than the latter as to finding a living from the profits of the *ryot*'s holdings. The caste or tribal conditions of the *ryots* have often an important bearing on their condition in life. A Santal or Bhumij, as a rule, supplements the profits of his cultivation by the income he derives from the sale of fowls, swine or other small cattle, such as goats and sheep; but an orthodox Hindu *ryot*, a Goala or Rajput or Teli for instance, has religious or social prejudices against the rearing even of the less objectionable cattle, such as sheep and goat, for the purpose of sale. The former can eke out his means of subsistence by living upon the flesh of the fowls and cattle he rears, but the latter would depend chiefly on the income he derives from the sale of such cattle as he may rear without prejudice to his own caste, and this he can do only where there is a ready market for them. In rural tracts, remote from towns, where there are no markets for the sale of livestock, the Hindu *ryot* has scarcely any inducement to rear it on any larger scale. It would appear from the reports received by me that about one half of the agriculturists are in a chronic state of indebtedness to their *mahajans*. My own enquiries, however, tend to show that this proportion is rather below the mark, and that about ten-sixteenths of this class are hopelessly indebted. It is a common saying in the *pargana* that the *chasis* (agriculturists) cultivate their lands for their *mahajans*.

"The mainstay of the *ryot* is the winter rice crop of December. After payment of rents and cesses by the sale of a portion of the crop, and returning the loan of grain previously taken from the *mahajan* with the usual addition of one-half of the advance, the portion of the produce left for the maintenance of the *ryots* and their families enables them as a rule to live upon it for only four months, viz., from Agrahayan to Phalgun (December to March). With Chait commences the strain. The *ryot* again resorts to the *mahajan* for an advance of grain, and lives upon the advance, supplemented (in the case of poorer *ryots*) by *mahua* flowers and *kend* fruits, till Bhadra, when the harvesting of the *bhadoi* crops, viz., *aus dhan* or early rice, *makai*, *marua*, etc., relieves the pressure, and enables him to hold out till the next Kartik. The interval between Chait and Bhadra is usually the hardest time for the bulk of the *ryots*, and during this period they can seldom afford to eat two full meals of grain a day."

From this it would seem that the *ryots* are usually able to clear off their debts each year, and to start again with fresh loans. Further, the Deputy Commissioner considered that the condition of the cultivators was better than the above account would imply. He described the people as "fairly prosperous" and said—"I saw no indications of want anywhere, and though I did receive complaints against the excessiveness of the land assessment and the operation of the income-tax I saw nothing to raise even a suspicion that the people were half-starved or poverty-striken. On the contrary, I was very greatly surprised to find them looking so well nourished, so well clothed and so comfortably housed, considering the manner in which the estate had been mismanaged during previous years".

The condition of the agricultural labourers was described as follows :—"On the whole, this class is better off than the poorer agriculturists. Even the poorest of the latter cannot do without the help of his *krishan* or *mulia*, and though himself pinched by want of a sufficiency of food, he takes care to keep his *krishan* on and in good humour. Indeed, the life of a poor *ryot* is a life of constant self-denial, endured with a philosophic contentment. My enquiries show that about a tenth of the number of the agricultural labourers cultivate small holdings of an average size of 2 *bighas* each, in addition to their working in the fields of their employers. These holdings are locally called *dahina* lands, and are cultivated with implements and cattle borrowed from their employers. Those who depend upon the labourers' wages for support usually find a hard time of it after the harvesting of the winter rice crops, when they have no work to do in the fields. At this time they go to the jungle and find aliving by selling fuel. Then, also, the children and the less able-bodied of the poorer members of this class usually betake themselves to begging, and are called

kangalis, or poor people, as distinct from the class of professional beggars."

As regards the artisan class, the Manager wrote :—"I have little to say regarding this class. Its chief subdivisions are carpenters, *lohars* or iron-smiths, oil-pressers, and weavers. They are very unequally distributed in the villages. The carpenters and *lohars* are usually found in the larger villages inhabited by well-to-do men. Numerically, the oil-pressers preponderate all over the *pargana*. The weavers form a minority. Here they do not find their occupation gone, nor suffer from any exceptional degree of poverty. They manufacture coarse cloths for the use of the lower classes of the population who prefer them to the more finished, but less durable, products of foreign mills. The carpenters and the *lohars* usually find difficulty in obtaining work during the four months of the year from September to December. The *lohars* have sometimes a bad reputation, and in a season of high prices are not infrequently found implicated in petty crimes. The general condition of the artisan class, excepting perhaps the *lohars*, is slightly better than that of the agricultural labourers." Another report gave a more favourable account of the artisan class, from which it appeared that they had no difficulty in obtaining a livelihood, but some of them spent too much in drink.

ENCLOSURE II.

Extracts from "The Affairs of a Tribe" *by Sri D.N. Majumdar* (Lucknow University).

We have already referred to the land tenure of the Hos. Subject to the communal control exercised through the Munda, the land is passed on from father to son. A Ho cannot dispose of this land in any way he chooses. The land does not belong to him absolutely, (it has been amended by the Bihar Ministry), it is hereditary and inalienable, and must descend to his sons and grandsons. "If a Ho has no direct male issue, the land goes to his brother, or next of kin, and if there be no kin, to the village community represented by the Munda. If a man dies leaving a widow, or a daughter, she is entitled to maintenance from the next male relative who takes the land and receives the Gomong on the daughter's marriage. Sons are entitled to certain shares of the father's land, whether hereditary or acquired. No matter how small the holding may be (unless too small) each son has a right to claim a partition. The eldest son receives a larger share, the younger sons equal shares of the remainder. A father may divide his land among his sons during his life time, retaining for himself a portion, or giving up entirely and living with one of his sons. At the marriage of a son, the father may give him a portion of his lands to set him up, and unless this is a large share, it does not preclude his having an additional share on his father's death, to equalise his share with that of his brothers."

The custom of allowing the eldest son a larger share than his brother is not uniformly followed,* for numerous instances have come to our notice in the course of our enquiries in which the property, movable as well as immovable has been equally divided between the sons. In a large number of cases daughters also have had a share in the father's property with the full approval of the village Panchayat. Considering the number of grown up unmarried women that are met with in every Ho village, it is but right that these women should have a share for their maintenance in their parents' property. When a Ho marries more than one wife, the children of the first wife are generally entitled to a larger share of the family property than those of the other wife.†

The rules of succession among the Hos are incompatible with the provisions of the Indian Succession Act of 1865 (X of 1865), so the Hos have been exempted from the operation of the Act, retrospectively from the passing of the Act, "provided that the

*This custom is prevalent only in certain localities and cannot be said to be the rule (P. C. R. C.)

†The number of grown up spinsters in the Ho villages is not a cause but a result of the custom whereby the unmarried women get a share. In the case of married daughters or widows, however, it is only very exceptionally that a share is given with the approval of the village Panchayat (P. C. R. C).

notification (no. 550D, 25, 1913, Ind. Govt.) shall not be held to affect any person in regard to whose rights a decision contrary to its effects has already been given by a competent civil court". This exemption was made on the recommendation of the Government of Bihar and Orissa to the Government of India, Home Department (vide letter no. 2093-A of 24th March, 1913). In order to give the benefit of exemption to those who have not been converted to Christianity, and who still continue to follow their "tribal customs" in the matter of succession and inheritance, the word "animists" has been replaced by the word "aborigines".

A closer observation of these customs regarding succession among the Hos would lead one to the conclusion that although they have not reached that standard of legal definiteness and progress which characterises the two main schools of Hindu Law (viz. Mitakshara and Dayabhaga), they represent a nearer approach to the Mitakshara than to the other school. The reason may be traceable to the fact that the Dayabhanga school is applicable exclusively in the Province of Bengal, whereas Mitakshara obtains in all other Provinces. As to the matter of similarity regarding the laws of succession existing between the Hos and the Mitakshara school, the following points are well worthy of notice. The sons are entitled to claim the partition of the property from their father, as obtains among the Hos, according to Mitakshara school, but only where the principle of joint ownership of the father along with the sons and heirs, is recognised. According to the Dayabhaga law, the father has absolute ownership of the property, so that the sons cannot claim any partition of it and he unlike a Ho father, is entitled to dispose of his property, both self-acquired as well as ancestral, in any way he likes. The contingency of the eldest son receiving a larger share than the others, does not find any place in either of the schools. With regard to females although they are not irrevocably barred from inheriting property, their right is circumscribed in many ways by these schools. Thus a Hindu woman is permitted by them to inherit the property of her husband, father or son, etc. under certain conditions, but her interest in it is limited, inasmuch as after her death the property passes not to her heirs, but to the next heir of the person who bequeathed it to her. Further, a Hindu woman can succeed to the *stridhan* (female property of which she is the sole owner) of another woman which she can alienate or dispose of in any way.*

---

*The quotation should not be taken to be authoritative. Some of the observations are fairly categorical. Dr. D. N. Mozumdar, Head of the Anthropological Department, Lucknow University has carried out a series of field researches and his book "Affairs of a Tribe" may be perused for further investigation (P. C. R. C.).

APPENDIX

TABLE I.

Decennial average of annual rainfall in inches in the district of Singhbhum.

[Source: Metereological Department, Poona.]

Rain registering stations in the district of Singhbhum.	1901—1910	1911—1920	1921—1930	1931—1940	1941—1950	Normal rainfall based on data up to 1950.
1	2	3	4	5	6	7
Chaibasa	53.52	49.84	51.03	50.00	49.22(c)	51.66
Chakradharpur	53.30	49.00(a)	55.09	54.07	59.37	52.51
Ghatsila	58.84(c)	54.17(d)	58.45	52.66	60.16(e)	56.85
Baharagora	60.81(e)	51.91(x)	53.32	51.05	62.65	55.53
Gailkura	59.20(c)	67.35(a)	71.04(d)	60.61	60.83	63.10
Manoharpur	65.48(d)	65.52(c)	61.25	57.72	64.91(e)	61.12
Kathari	53.32	57.44(a)	57.38(d)	57.60(c)	62.49	54.35
Jagannathpur	54.31(b)	49.43(d)	54.01(c)	53.75	59.49	52.94
Sonua	..	..	..	54.73(e)	57.72	54.91
Kharsawan	58.30	52.50(e)	51.60	47.58(e)	56.94	53.19
Seraikela	50.19	47.56(c)	52.04(d)	46.52(d)	57.53	50.35
Jamshedpur	..	..	56.90(d)	53.57	60.25	53.51
Majhgaon	..	..	62.05(b)	55.15	62.34	58.93

(x) Data for 4 years.
(a) Data for 5 years.
(b) Data for 6 years.
(c) Data for 7 years.
(d) Data for 8 years.
(e) Data for 9 years.

TABLE II-A.

Mineral output in the district of Singhbhum.

[Source: Office of the Chief Inspector of Mines, Dhanbad.]

Minerals.	Units.	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	2	3	4	5	6	7	8	9	10	11
Apatite	Tons.	220	..	..	..	..	..	..	..	..
Asbestos	Cwt.	..	..	..	..	400	..	..	..	..
China-clay	Tons	9,212	14,816	9,120	10,530	11,501	6,872	5,897	6,180	6,282
Chromite ..	Tons	5,101	2,749	7,638	7,068	7,010	11,397	7,053	7,678	5,194
Copper Ore	Tons	123,749	153,636	175,010	201,722	328,676	350,801	357,194	371,456	288,076
Gravel ..	Tons	3,449	7,197	2,702	3,590	6,618	9,977	7,074	13,936	14,117
Iron-ore ..	Tons	1,009,435	588,290	666,874	616,946	810,547	1,155,965	1,375,214	1,587,362	1,418,834
Kyanite ..	Tons	321	247	537	..	..	..	..	805	830
Limestone	Tons	..	905	1,479	3,963	188	..	..	..	..
Manganese Ore.	Tons	11,203	7,938	2,272	7,453	15,112	16,667	16,722	24,180	24,469
Silica ..	Tons	..	..	..	..	..	..	..	..	..
Steatite ..	Tons	208	442	152	656	244	128	125	82	74
Stone ..	Tons	94,999	51,387	73,460	61,456	37,981	71,844	59,172	32,555	46,338
Murum ..	Tons	30	..	50	225	63	..	..	..	..
Gold ..	..	..	..	..	..	..	..	..	..	..
Slate ..	Tons	27	183	193	123	142	..	..	..	..

TABLE II-A—*contd.*

Minerals.	Units.	1939	1940	1941	1942	1943	1944	1945	1946
1	2	12	13	14	15	16	17	18	19
Apatite ..	.. Tons	..	..	1,984	..	..	..	..	..
Asbestos ..	.. Cwt.	..	..	..	1,666	1,381	3,441	5,259	2,061
China-clay	.. Tons	10,203	11,784	15,326	29,868	24,306	22,991	26,586	18,538
Chromite ..	.. Tons	4,476	3,521	4,967	5,916	3,939	4,541	5,223	3,860
Copper Ore	.. Tons	360,216	401,235	381,334	363,052	359,763	325,953	329,305	352,712
Gravel ..	.. Tons	14,203	14,296	33,404	78,571	67,421	46,397	24,687	94,707
Iron-ore ..	.. Tons	1,543,934	1,654,681	1,800,574	1,773,091	1,328,783	940,875	1,046,099	974,005
Kyanite ..	.. Tons	766	119	64	..	..	..	..	14
Limestone	.. Tons	..	..	..	..	..	..	..	..
Manganese Ore	.. Tons	35,803	32,452	53,308	12,156	15,316	4,495	2,174	10,787
Silica ..	.. Tons	..	..	..	..	..	..	..	..
Steatite ..	.. Tons	133	270	335	479	317	1,459	195	16,100
Stone ..	.. Tons	52,235	36,618	23,166	36,835	102,212	137,130	99,738	39,750
Murum ..	.. Tons	..	..	..	..	..	..	..	..
Gold ..	.. ..	..	..	..	..	..	..	..	..
Slate ..	.. Tons	..	..	..	..	..	..	..	..

TABLE II-A—*concld.*

Minerals.	Units.	1947	1948	1949	1950	1951	1952	1953
1	2	20	21	22	23	24	25	26
Apatite	Tons	..	..	..	..	..	..	3,814
Asbestos	Cwt.	..	.	1,300	965	4,774	4,518	2,496
China-clay	Tons	18,102	17,036	16,755	21,965	31,600	27,976	33,700
Chromite	Tons	3,067	2,035	2,561	3,288	3,412	6,874	5,805
Copper Ore	Tons	323,035	332,276	329,304	360,309	369,058	324,636	237,960
Gravel	Tons	22,269	..	11,903	14,214	..	..	53,081
Iron-ore	Tons	1,105,767	1,145,034	1,364,878	1,194,853	1,765,123	1,939,446	1,884,517
Kyanite	Tons	..	12,192	12,361	27,157	31,752	22,144	11,180
Limestone	Tons	..	..	263,089	306,915	335,376	346,962	278,086
Manganese Ore ..	Tons	18,454	19,112	36,376	17,224	48,382	48,018	43,172
Silica	Tons	..	4,577	4,151	4,375	4,423	4,608	4,272
Steatite	Tons	1,000	60	2,900	55,020	46,600	23,160	34,560
Stone	Tons	95,622	72,670	28,663	40,975	40,402	41,618	43,108
Murum	Tons	..	..	..	..	..	..	3,900
Gold	..	..	..	..	..	..	..	..
Slate	Tons	..	..	..	..	..	..	..

TABLE II-B.

Employment in mines in the district of Singhbhum.

[Source: Office of the Chief Inspector of Mines, Dhanbad.]

Minerals.		1930	1931	1932	1933	1934	1935	1936	1937	1938
1		2	3	4	5	6	7	8	9	10
Apatite	..	19	..	..	..	..	..	..	..	..
Asbestos	..	..	..	..	..	76	..	..	..	..
China clay	..	526	824	1,194	1,237	1,048	941	783	942	1,016
Copper Ore	..	1,089	1,759	1,740	2,050	2,787	2,784	2,875	3,212	2,737
Gravel	..	*	*	*	*	*	*	*	*	*
Iron ore	..	5,960	4,947	3,625	3,191	5,219	7,594	12,615	10,906	9,596
Kyanite	..	304	43	26	..	..	..	..	138	161
Limestone	..	..	34	104	36	17	..	..	..	..
Manganese Ore	..	943	455	204	290	457	505	576	725	901
Silica	..	..	..	..	..	..	..	..	..	..
Steatite	..	91	137	58	110	83	34	31	74	22
Stone	..	288	763	421	689	1,007	1,167	730	907	1,325
Murum	..	*	*	*	*	..	..	..	..	..
Gold	..	10	..	4	10	11	..	..	17	..
Slate	..	35	64	38	24	21	..	..	..	..
Chromite	..	896	712	1,352	1,289	1,275	1.482	975	935	782

* Figures are included in those for stone.

TABLE II-B—*contd.*

Minerals.	1939	1940	1941	1942	1943	1944	1945	1946
1	11	12	13	14	15	16	17	18
Apatite	..	..	221	..	..	..	..	..
Asbestos	..	..	..	74	98	104	188	135
China-clay	1,604	1,911	2,818	5,278	4,512	3,527	3,236	3,208
Copper Ore	3,085	3,614	3,609	3,689	3,954	3,965	3,333	3,757
Gravel	*	228	*	64	308	104	129	691
Iron-ore	8,855	10,102	10,146	10,317	9,336	8,155	6,867	7,023
Kyanite	20	60	27	..	..	..	..	11
Limestone	..	..	..	..	..	..	..	..
Manganese Ore	821	1,729	865	721	356	70	131	371
Silica	..	..	..	..	..	..	..	..
Steatite	24	208	24	33	39	39	15	21
Stone	1,405	1,235	1,278	1,704	1,993	1,747	1,308	400
Murum	..	..	..	..	..	..	..	..
Gold	..	..	..	..	..	..	..	..
Slate	..	..	..	..	..	..	..	..
Chromite	771	1,000	740	957	793	860	860	850

* Figures are included in those for stone.

TABLE II-B—*concld.*

Minerals.	1947	1948	1949	1950	1951	1952	1953
1	19	20	21	22	23	24	25
Apatite	..	..	..	..	..	..	120
Asbestos	..	..	77	55	191	145	76
China-clay	2,086	2,064	2,002	2,209	2,542	2,318	2,465
Copper Ore	3,961	3,628	3,605	3,655	3,710	3,880	3,677
Gravel	114	..	47	74	..	..	37
Iron-ore	6,634	7,054	7,282	8,609	10,493	12,342	15,778
Kyanite	..	252	386	939	1,128	1,764	1,988
Limestone	..	..	1,432	1,462	1,421	1,214	913
Manganese Ore	394	373	618	502	608	1,371	1,195
Silica	..	86	100	98	100	122	111
Steatite	27	12	41	78	87	73	78
Stone	1,019	574	256	643	392	337	257
Murum	..	..	..	..	..	..	..
Gold	..	..	..	..	..	..	..
Slate	..	..	..	..	..	..	..
Chromite	615	466	451	496	639	762	69

TABLE III-A.

Agricultural Statistics in the district of Singhbhum.

(Area in acres.)

[Source: Directorate of Economics and Statistics.]

Years.	Winter rice.	Autumn rice.	Wheat.	Barley.	Maize.	Gram.	Linseed.
1	2	3	4	5	6	7	8
1943-44	200,300	219,200	1,900	..	7,300	1,700	8,700
1944-45	195,700	236,400	1,700	..	8,900	1,000	8,900
1945-46	325,200	222,000	1,800	..	4,600	700	8,700
1946-47	370,600	223,300	1,800	..	5,300	1,200	9,200
1947-48	384,100	228,900	1,900	..	5,000	1,200	8,200
1948-49	386,900	229,100	1,400	..	5,300	1,000	7,100
1949-50	512,820	99,647	1,486	2	21,300	7,214	17,811
1950-51	561,015	85,785	2,172	13	19,842	9,092	12,578
1951-52	482,199	93,028	1,536	1	20,419	7,989	21,199
1952-53	508,722	92,496	2,662	..	17,590	9,072	[illegible],161
1953-54	636,938	79,264	1,320	1	19,333	5,526	21,780

TABLE III-A—*concld.*

Years.	Til.	Rape and mustard.	Sugar-cane.	Arhar.	Jute.	Tobacco.
1	9	10	11	12	13	14
1943-44	2,000	8,900	500	800	..	100
1944-45	1,900	7,100	800	600	..	..
1945-46	1,500	6,800	500	200	..	..
1946-47	1,300	7,400	400	400	..	..
1947-48	800	6,900	400	400	..	..
1948-49	800	5,600	500	200	..	..
1949-50	2,793	1,868	163	3,821	..	97
1950-51	3,625	1,776	162	5,285	..	172
1951-52	3,090	2,055	65	6,578	..	130
1952-53	1,683	2,475	50	8,111	..	425
1953-54	1,319	1,275	54	7.100	..	172

TABLE III-B.

Agricultural Statistics in the district of Singhbhum.

(*Produce in tons*).
[Source: Directorate of Economics and Statistics.]

Years.	Winter rice.	Autumn rice.	Wheat	Barley.	Maize.	Gram.	Linseed.	Til.	Rape and mustard.	Sugar-cane. (*Gur*).	Arhar.	Jute.	Tobacco.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1943-44	53,713	48,313	177	..	1,529	336	820	178	1,625	553	..	..	30
1944-45	42,415	29,873	196	..	948	253	736	148	913	963	..	..	..
1945-46	40,617	13,700	105	..	490	138	719	68	752	448	..	..	..
1946-47	96,659	46,592	111	..	1,110	237	807	155	1,099	448	..	..	..
1947-48	1,21,344	19,508	165	..	1,047	237	773	89	1,011	397	..	..	..
1948-49	1,32,178	47,802	198	..	1,382	225	669	89	821	553	..	..	..
1949-50	1,90,392	16,692	321	..	4,577	1,251	2,022	308	208	30	..	..	21
1950-51	1,91,176	19,139	377	2	4,249	1,179	1,086	352	187	8	..	..	41
1951-52	1,58,418	15,646	259	..	5,003	1,167	1,807	370	138	7	..	..	18
1952-53	1,70,257	13,973	426	..	4,064	1,066	3,654	244	273	34	1,490	..	120
1953-54	2,60,864	9,885	267	..	3,381	708	3,400	104	123	4	1,226	..	33

TABLE IV.

Livestock population in the district of Singhbhum.

[Source: Livestock Census Report.]

Census Years.	Cattle.				Buffaloes.				Sheep.	Goats.
	Male cattle.	Female cattle.	Young stock (calves).	Total.	Male buffaloes.	Female buffaloes.	Young stock (buffalo calves).	Total.		
1	2	3	4	5	6	7	8	9	10	11
1920	1,47,668	1,27,969	87,560	3,63,197	42,729	11,932	7,616	62,277	76,074	1,80,309
1925	1,84,147	1,61,901	118,729	4,64,777	43,969	9,995	7,073	66,037	91,689	3,23,987
1930	2,04,591	1,59,239	107,588	4,71,418	53,051	9,220	5,492	67,763	90,521	3,01,715
1940	2,24,276	1,73,824	133,506	5,31,606	45,162	9,759	8,436	63,357	91,103	3,23,509
1945	1,96,709	1,45,291	85,027	4,27,027	41,352	8,700	4,741	54,793	76,173	2,36,436
1951	3,38,120	2,31,436	128,271	6,97,827	54,874	14,787	5,841	75,502	1,67,241	4,46,017

TABLE V.

Livestock mortality in the district of Singhbhum for bovine population only.

[Source: Livestock Census Report.]

Year.	Causes of deaths.			
	Rinderpest.	Foot and Mouth diseases.	Haemorrhagic Septicaemia.	Other contagious diseases.
1935-36 ..	139	—	100	99
1936-37 ..	231	2	57	8
1937-38 ..	106	—	159	16
1938-39 ..	307	2	227	12
1939-40 ..	78	—	182	4
1940-41 ..	200	—	116	63
1941-42 ..	156	3	43	81
1942-43 ..	2	—	81	11
1943-44 ..	94	—	21	27
1944-45 ..	111	2	69	15
1945-46 ..	7	2	80	38
1946-47 ..	25	—	81	136
1947-48 ..	397	5	59	55
1948-49 ..	77	—	104	45
1949-50 ..	181	8	106	68
1950-51 ..	75	2	39	75
1951-52 ..	69	50	25	144
1952-53 ..	48	6	176	259
1953-54 ..	2	3	42	82

TABLE VI.

Epidemiological statistics in the district of Singhbhum.

[Source: Office of the Civil Surgeon and Directorate of Health Services.]

Year.	Cholera.		Plague.		Small-pox.		No. of Inoculations performed.		No. of Vaccinations.	
	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Anti-Cholera.	Anti-Plague.	Primary.	Re-vaccination.
1	2	3	4	5	6	7	8	9	10	11
1930 ..	—	104	—	—	—	195	—	—	21,176	9,630
1931 ..	—	39	—	—	—	176	—	—	19,074	11,536
1932 ..	—	1	—	—	—	3	—	—	22,758	1,792
1933 ..	—	76	—	—	—	93	—	—	20,832	862
1934 ..	—	10	—	—	—	698	—	—	23,569	5,221
1935 ..	—	576	—	—	—	506	—	—	26,381	6,112
1936 ..	—	53	—	—	—	950	—	—	20,989	10,209
1937 ..	—	193	—	—	—	145	—	—	24,319	28,890
1938 ..	—	34	—	—	—	40	—	—	27,096	42,885
1939 ..	—	70	—	—	—	14	—	—	26,204	38,024
1940 ..	—	151	—	—	—	274	—	—	25,375	91,343
1941 ..	200	109	—	—	798	433	3,000	—	27,981	1,85,666

TABLE VI—*concld*.

Year.	Cholera.		Plague.		Small-pox.		No. of Inoculations performed.		No. of Vaccinations.	
	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Anti-Cholera.	Anti-Plague.	Primary.	Re-vaccination.
1	2	3	4	5	6	7	8	9	10	11
1942 ..	227	159	—	—	377	195	4,956	—	24,046	63,785
1943 ..	1,162	640	—	—	103	16	32,602	—	20,437	53,035
1944 ..	151	91	—	—	331	75	8,695	—	25,389	59,103
1945 ..	58	22	—	—	400	139	—	—	26,393	1,07,350
1946 ..	40	27	—	—	379	136	—	—	27,226	1,80,380
1947 ..	245	113	—	—	812	387	—	—	25,599	1,42,477
1948 ..	142	87	—	—	319	50	1,07,011	—	25,164	1,04,926
1949 ..	48	12	—	—	67	4	76,905	—	30,625	1,04,799
1950 ..	374	184	—	—	677	129	43,810	—	34,531	2,23,584
1951 ..	65	15	—	—	3,128	1,420	36,531	—	34,192	1,07,092
1952 ..	27	36	—	—	143	170	1,08,609	—	31,490	2,36,458
1953 ..	101	69	—	—	58	82	2,91,720	—	34,329	2,81,281
1954 ..	19	2	—	—	216	63	2,27,476	—	39,274	2,86,460
1955 ..	—	21	—	—	—	7	2,50,562	—	30,723	3,29,053
1956 ..	—	5	—	—	—	6	4,81,712	—	58,602	4,32,816

TABLE VII.

Livelihood Classes by Educational Standards in 1951 for the district of Singhbhum.
[Source: Census Tables, 1951.]

Educational Standard.	Agricultural Classes.							
	Cultivators of land wholly or mainly owned and their dependents.		Cultivators of land wholly or mainly unowned and their dependents.		Cultivating labourers and their dependents.		Non-cultivating owners of land, Agricultural rent receivers and their dependents.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9
Literate	62,888	9,196	1,420	366	3,473	780	538	170
Middle School	5,657	561	190	12	270	16	82	12
Matriculate	1,069	95	19	6	28	1	33	4
Intermediate	60	5	—	1	2	—	4	—
Degrees or Diplomas—								
Graduate	50	7	1	—	2	—	8	—
Post-Graduate	18	1	—	—	—	—	1	—
Teaching	49	4	—	—	—	—	—	—
Engineering	—	—	—	—	—	—	1	—
Agriculture	2	—	—	—	—	—	1	—
Veterinary	—	—	—	—	—	—	—	—
Commerce	—	—	—	—	—	—	—	—
Legal	5	—	—	—	—	—	—	—
Medical	59	1	—	—	—	—	3	—
Others	7	—	—	1	—	—	—	—
Total	69,864	9,870	1,630	386	3,775	797	671	186

TABLE VII—*concld.*

Educational Standard.	Non-Agricultural Classes.							
	Production other than cultivation.		Commerce.		Transport.		Other services and miscellaneous sources.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	10	11	12	13	14	15	16	17
Literate	52,090	20,972	12,716	4,789	4,817	2,523	16,409	5,724
Middle School	9,517	2,249	1,377	188	738	130	2,632	731
Matriculate	7,125	1,042	628	44	936	44	2,321	280
Intermediate	1,036	128	94	6	127	3	398	91
Degrees or Diplomas—								
Graduate	958	119	52	1	67	2	419	50
Post-Graduate	112	7	5	—	2	3	77	8
Teaching	41	21	—	—	—	—	100	—
Engineering	356	—	2	—	2	—	52	—
Agriculture	18	—	—	—	—	—	2	—
Veterinary	—	—	1	—	—	—	—	—
Commerce	2	—	4	—	3	—	14	1
Legal	102	—	1	—	—	—	245	1
Medical	134	9	5	2	4	—	130	7
Others	30	6	2	—	—	2	56	8
Total	71,521	24,553	14,887	5,030	6,696	2,707	22,855	6,901

TABLE VIII.

Employment in factories in the district of Singhbhum (Registered under the Factories Act of 1948).

Description of factory.	Number of factories.	Employees (average number of workers). Male.	Female.	Total.
1	2	3	4	5
Railway Workshop.. ..	1	510	—	510
Electric Light and Power ..	6	52	—	52
Motor Vehicles	5	137	3	140
Flour Mills	35	116	—	116
Rice Mills	7	87	42	129
Oil Mills	5	142	2	144
Knitting Mills	1	5	—	5
Saw Mills	22	189	—	189
Printing Press	17	156	2	158
Lac including Shellac ..	1	3	12	15
Manufacture of Glass and Glass Products. ..	1	574	32	606
Manufacture of Cement ..	1	797	206	1,003
Hume Pipe	1	85	—	85
Metal Extracting and Refining	1	21,887	1,921	23,808
Metal Rolling	1	3,841	374	4,215
Tube Making and Wire Drawing	1	1,433	256	1,689
Metal Founding	1	1,161	475	1,636
Metal Extracting and Refining (Nonferrous).	1	1,443	258	1,701
Metal Containers and Steel Trunks	5	324	20	344
General and Jobbing Engineering	9	2,884	191	3,075
Insulated Wires and Cables	1	1,086	90	1,176
Ice Factories	4	22	..	22
Gas Manufacture and Distribution	2	52	..	52
Water Supply Stations ..	1	50	12	62
Pumping Sewage	5	97	19	116
Bidi Factories	245	6,692	6	6,698
Wrapping, Packing, Filling, etc. (Petrol)	1	19	..	19

[Source: Chief Inspector of Factories, Bihar. These figures are not up to date (P. C. R. C.).]

TABLE IX:

Area and population in the district of Singhbhum.*

District and Subdivisions.	Area in square miles.	Number of Towns.	Number of Villages.	Population in 1951. Urban.	Rural.	Total.	Male.	Female.	Number of houses occupied.	Number of persons per square mile.
1	2	3	4	5	6	7	8	9	10	11
Singhbhum district ..	4,475	10	3,731	2,88,917	1,191,899	14,80,816	7,52,424	7,28,392	2,94,855	331
Sadar subdivision. ..	2,718	5	1,587	53,109	6,14,281	6,67,390	3,30,309	3,37,081	1,36,045	246
Dhalbhum subdivision.	1,167	3	1,381	2,27,593	3,85,911	6,13,504	3,21,842	2,91,662	1,18,066	528
Seraikela subdivision ..	590	2	763	8,215	1,91,707	1,99,922	1,00,273	99,649	40,744	339

District and Subdivisions.	Population at the previous censuses. 1881	1891	1901	1911	1921	1931	1941	Percentage of variation from 1881 to 1951.
1	12	13	14	15	16	17	18	19
Singhbhum district. ..	4,53,775	5,45,488	7,54,658	8,43,040	9,11,935	11,16,424	13,50,141	329
Sadar subdivision ..	..	..	..	..	..	..	6,11,315	
Dhalbhum subdivision	..	..	..	..	..	..	5,33,402	
Seraikela subdivision. ..	..	..	..		..	..	..	

*Compiled from Census Tables, 1951. There have been additions of areas to the district since.(P. C. R. C.)

TABLE X.

Population of Towns in the district of Singhbhum

[Source: Census Tables.]

Towns in the district of Singhbhum.	Total Population.									Males.			
	1872	1881	1891	1901	1911	1921	1931	1941	1951	1872	1881	1891	1901
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Jamshedpur ..	..	..	..	..	5,672	57,360	92,459	165,395	218,162	..	..	..	..
Chakradharpur ..	..	..	..	..	..	10,093	11,191	14,807	19,948	..	..	..	..
Chaibasa ..	4,641	6,006	6,850	8,653	9,009	9,178	10,785	13,052	16,474	2,431	3,126	3,553	4,326
Noamundi ..	..	..	..	..	..	..	..	6,389	7,227	..	..	..	..
Mosabani ..	..	..	..	..	..	..	..	8,270	5,220	..	..	..	..
Seraikela ..	..	..	..	..	..	..	..	6,105	4,777	..	..	..	..
Manoharpur ..	..	..	..	..	..	..	..	4,397	4,734	..	..	..	..
Gua	..	..	..	..	..	..	..	..	4,726	..	..	..	..
Maubhandar ..	..	..	..	..	..	..	..	..	4,211	..	..	..	..
Kharsawan ..	..	..	..	..	..	..	..	..	3,438	..	..	..	..

TABLE X—*concld.*

Towns in the district of Singhbhum.	Males.					Females.								
	1911	1921	1931	1941	1951	1872	1881	1891	1901	1911	1921	1931	1941	1951
1	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Jamshedpur ..	3,380	35,385	56,212	96,495	1,21,055	..	..	..	..	2,292	21,975	36,247	68,900	97,107
Chakradharpur ..	..	5,601	6,215	7,964	10,306	..	..	..	..	..	4,492	4,976	6,843	9,642
Chaibasa ..	4,686	4,748	5,716	6,953	8,877	2,210	2,880	3,297	4,327	4,323	4,430	5,069	6,099	7,597
Noamundi ..	..	..	..	3,526	3,869	..	..	..	..	..	..	..	2,863	3,356
Mosabani ..	..	..	..	5,266	3,383	..	..	..	..	..	..	..	3,004	1,837
Seraikela ..	..	..	..	3,107	2,540	..	..	..	..	..	..	..	2,998	2,237
Manoharpur ..	..	..	..	2,315	2,646	..	..	..	..	..	..	..	2,082	2,088
Gua	..	..	..	..	2,474	..	..	..	..	..	..	..	..	2,252
Maubhandar ..	..	..	..	..	2,369	..	..	..	..	..	..	..	..	1,842
Kharsawan ..	..	..	..	..	1,737	..	..	..	..	..	..	..	..	1,701

TABLE XII.

Religion in the district of Singhbhum.

[Source: Census Tables.]

Census year.	Population of district.			Hindus.			Muslims.			Christians.		
	Persons.	Males.	Females.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13
1901	7,54,658	3,72,025	3,82,633	..	..	2,65,144	..	..	5,373	..	..	6,961
1941	11,44,717*	5,82,037	5,62,680	2,20,431	1,97,024	4,17,455	25,352	17,881	43,233	3,570	2,841	6,411
1951	14,80,816*	7,52,424	7,28,392	4,79,523	4,47,436	9,26,959	31,724	23,964	55,688	15,410	14,427	29,837

TOTAL XI—*contd.*

Census year.	Animists.			Sikhs.			Jains.			Buddhists.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females	Total.
1	14	15	16	17	18	19	20	21	22	23	14	25
1901	..	..	3,36,088	..	..	..	..	..	..	..	..	..
1941	..	..	..	4,804	3,426	8,230	66	69	135	227	118	345
1951	..	..	..	7,551	6,847	14,398	261	171	432	167	110	277

*These figures include the figures for Seraikela-Kharsawan which were added to the district in 1949.

TABLE XI—*concld.*

Census year.	Jews.			Tribals.			Others.			Zoroastrians			Non-tribals other than specified.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1901	..	..	..	..	..	..	..	13	..	..	..	..	..	..	..
1941	..	..	..	3,27,371	3,41,226	6,68,597	..	..	..	216	95	311	..	..	..
1951	5	..	5	2,15,334	2,35,232	4,50,566	..	..	..	223	172	395	2,226	33	2,259

TABLE XII.

Statistics of crime in the district of Singhbhum.

[Source: Office of the Superintendent of Police.]

Year.	Murder.	Dacoity.	Robbery.	Riot.	Burglary.	Theft.
1	2	3	4	5	6	7
1952	65	45	36	39	466	999
1953	70	51	46	45	537	1,050
1954	60	29	25	50	479	1,126
1955	51	33	17	70	521	1,102
1956	62	28	24	101	526	1,288

TABLE XIII.

Consumption of principal intoxicants in the district of Singhbhum.

[Source: Office of the Superintendent of Excise.]

Year		Country Spirit.	Ganja.			Bhang.			Opium.		
		L. P. gallons.	Mds.	Srs.	Chs.	Mds.	Srs.	Chs.	Mds.	Srs.	Chs.
1900-01	..	Nil	13	9	0	2	0	0	11	19	12
1901-02	..	Nil	15	11	15	2	35	0	14	18	0
1902-03	..	Nil	15	13	3	6	20	0	15	31	0
1903-04	..	Nil	15	28	0	1	20	0	15	18	0
1904-05	..	Nil	17	4	3	3	25	11	16	35	0
1905-06	..	Nil	16	10	0	4	4	0	15	39	0
1906-07	..	Nil	13	30	0	6	8	0	17	10	0
1907-08	..	Nil	14	2	0	6	33	0	19	24	0
1908-09	..	Nil	11	3	0	7	0	0	14	23	0
1909-10	..	Nil	15	19	0	6	27	0	14	26	0
1910-11	..	Nil	15	9	0	6	17	0	15	0	0
1911-12	..	Nil	15	36	0	7	21	0	17	34	0
1912-13	..	Nil	17	20	0	8	18	0	18	32	0
1913-14	..	Nil	20	7	0	11	0	0	20	25	0
1914-15	..	Nil	21	27	0	10	20	0	25	2	0
1915-16	..	Nil	4	29	0	12	30	0	24	24	0
1916-17	..	Nil	15	30	0	9	12	0	22	18	0
1917-18	..	5,286	16	13	0	13	31	0	23	35	0
1918-19	..	20,456	16	17	0	14	30	0	23	38	0
1919-20	..	23,245	19	32	0	15	8	0	23	14	0
1920-21	..	26,908	21	26	0	17	28	0	26	37	0
1921-22	..	28,616	23	27	0	15	28	0	31	19	0
1922-23	..	23,093	24	6	0	15	12	0	33	19	0
1923-24	..	25,437	26	7	0	17	3	0	32	35	0
1924-25	..	32,103	21	2	0	17	0	0	33	18	0

TABLE XIII—*concld.*

Year.		Country Spirit.	*Ganja.*			*Bhang.*			Opium.		
		L. P. gallons.	Mds.	Srs.	Chs.	Mds.	Srs.	Chs.	Mds.	Srs.	Chs.
1925-26	..	28,721	20	4	0	12	35	0	29	21	0
1926-27	..	24,767	20	2	0	12	30	0	26	36	0
1927-28	..	26,520	19	21	0	8	2	0	26	27	0
1928-29	..	25,432	23	11	0	7	31	0	26	31	0
1929-30	..	27,991	25	9	0	7	17	0	24	21	0
1930-31	..	24,126	25	14	0	6	34	0	21	24	0
1931-32	..	45,404	24	33	0	6	26	0	18	39	0
1932-33	..	26,552	19	32	0	6	16	0	18	26	0
1933-34	..	26,914	20	21	0	7	2	0	25	6	0
1934-35	..	32,055	21	24	0	7	25	0	27	22	0
1935-36	..	35,337	21	13	0	13	26	0	28	16	0
1936-37	..	36,923	22	1	0	14	15	0	27	10	0
1937-38	..	58,343	24	15	0	20	12	0	28	8	0
1938-39	..	70,573	25	19	0	21	20	0	29	27	0
1939-40	..	81,148	19	10	0	18	17	0	17	13	0
1940-41	..	85,208	18	0	0	21	10	0	17	35	0
1941-42	..	85,497	15	18	0	20	30	0	17	24	0
1942-43	..	93,170	18	20	0	22	14	0	18	35	0
1943-44	..	98,827	21	35	0	26	10	0	17	31	0
1944-45	..	89,176	20	26	0	15	12	0	18	15	0
1945-46	..	98,046	12	32	0	23	24	0	19	8	0
1946-47	..	1,00,677	7	5	0	22	9	0	34	5	0
1947-48	..	80,039	8	14	0	22	38	0	15	22	0
1948-49	..	75,413	16	25	0	34	26	0	16	13	0
1949-50	..	1,41,086	12	10	0	53	36	0	16	18	0
1950-51	..	1,61,792	13	1	0	53	17	0	13	24	0
1951-52	..	1,81,858	18	10	0	49	24	0	11	28	0
1952-53	..	1,28,089	17	0	0	55	1	0	8	18	0
1953-54	..	1,18,666	16	39	0	56	16	0	6	9	0

TABLE XIV.

List of towns and villages electrified in the district of Singhbhum.

[Source: Office of the Chief Electrical Engineer, Bihar.]

Serial no.	Name of the places electrified.	Date on which electrified.	Remarks.
1	Barajamda ..	.. 15th January, 1957	Power supplied by the State Electricity Department.
2	Chakradharpur (T)	.. 18th May, 1956	Ditto.
3	Gua ..	.. 4th September, 1956	Ditto.
4	Harhargutu ..	.. 1st October, 1956	Ditto.
5	Hatgamaria ..	.. August, 1957	Ditto.
6	Jhinkpani ..	.. 4th September, 1957	Ditto.
7	Jagannathpur ..	.. January, 1958	Ditto.
8	Kandra ..	.. 14th June, 1956	Ditto.
9	Kharsawan ..	.. 20th June, 1956	Ditto.
10	Karaikella ..	.. 11th June, 1957	Ditto.
11	Khapersai ..	.. 16th November, 1957	Ditto.
12	Karamdih ..	.. August, 1957	Ditto.
13	Karam Cocha ..	.. January, 1958	Ditto.
14	Kitadih ..	.. February, 1958	Ditto.
15	Mango ..	.. 19th May, 1957	Ditto.
16	Naomundi ..	.. 18th February, 1957	Ditto.
17	Parsudih ..	.. 22nd June 1957	Ditto.
18	Rajkharswan ..	.. 20th June, 1957	Ditto.
19	Rugardih ..	.. January, 1958	Ditto.
20	Bagbera ..	.. August, 1957	Ditto.
21	Sundernagar ..	.. 1st October, 1956	Ditto.
22	Seraikella (T) ..	.. 18th May, 1956	Ditto.
23	Sini ..	.. 13th April, 1957	Ditto.
24	Chandil ..	.. January, 1958	Ditto.
25	Haludbani ..	.. January, 1958	Ditto.
26	Chaibasa (T) ..	.. 18th May, 1956	Through the licensee, i.e., Chaibasa Elec. Supply Co., Chaibasa.
27	Jugsalai (N. A. C.)	.. ..	Power is being supplied by the Jugsalai Elec. Supply Company.
28	Jamshedpur (C)	.. ..	Power is being supplied by the D.V. C.
29	Ghatsila	.. 18th March 1958	Power availed from I. C. C., Mosabani.

Note—(T)—Town.

(N. A. C.)—Notified Area Committee.

(C)—City.

TABLE XV.

Revenue from Forests for 1957-58.

(*See* Chapter on Forests.)

[Source :Office of the Chief Conservator of forests, Bihar.]

Heads.	Porahat Division.	Saranda Division.	Chaibasa Division.	Dhalbhum Division.	Kolhan Division.	Dhanbad Afforestation Division.
1	2	3	4	5	6	7
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
I. Timber and other produce removed by Government Agency—						
(a) Timber	104	82,628	1,813	5,000	1,000	400
(b) Firewood and Charcoal	5	83,226	3,303	15,000	6,000	2,000
II. Timber and other produce removed by consumers and purchasers—						
(a) Timber	12,12,615	87,93,597	2,31,737	2,00,000	3,00,000	34,500
(b) Firewood and Charcoal	63,139	59,593	2,00,822	2,00,000	70,000	34,500
(c) Bamboos	29,913	20,102	Nil	750	100	24,500
(d) Grass and fodder grass	4	335	133	300	10	Nil
(e) Other minor produce	99,080	20,929	16,991	2,05,000	45,000	16,000
(f) Commutation Fees	376	Nil	Nil	1,000	300	Nil
III. Drift and Waifwood and confiscated forest produce	Nil	Nil	Nil	200	10	75
IV. Miscellaneous—						
(a) Fines and forfeitures	1,609	4,068	338	Nil	200	2,000
(b) Other sources	4,190	21,426	12,490	15,000	10,000	50,000
(c) Forest Road Cess	4,069	1,396	595	Nil	3,000	Nil
V. *Deduct*—Refund	(—)13	Nil	(—)877	(—)500	(—)200	(—)502

GLOSSARY

GLOSSARY

Aghani .. Crops that are harvested in the month of *Aghan*, which roughly corresponds to the month of December-January of the English calendar.

Ahara .. .. An *ahara* is an artificial water reservoir made usually by damming a rivulet or surface water is blocked up for irrigation purposes.

Ananta .. An ornament for the arm, the wearing of which has religious significance for some of the Hindus who wear this ornament on *Ananta Chaturdasi* day, which comes on the 29th day of the month of *Bhado* (*Bhadrapada*).

Asadri Puja .. A ritual performed in the month of *Asarha* on the eve of the rains which mark the beginning of agricultural operations.

Atavika-desa .. Literally forest country. Roughly the hilly tracts full of forests extending eastward from Jabbalpur to Sahabad were known by this name.

Bandha .. Embankment.

Banduka .. Gun.

Barkandazes . Usually the personal guards of a chief were known by this designation. It may also mean constables.

Basti . Village.

Bhadai .. Autumn crops.

Bhuta .. .. The common expression to denote spirits or ghosts.

Bigha .. .. A particular measure of land common in many parts of Bihar which works out approximately to 5/8th of an acre.

Biri .. .. A cheap type of smoke of tobacco and *kendu* leaves.

Chautha	.. The detailed analysis of *chautha* is a subject of historical text. Here it would suffice to say that Shivaji often levied *chautha* and *sardesmukhi* from neighbouring and sometimes from distant districts directly or nominally within other states. In theory the *chautha* was one-fourth of the revenue of a district invaded by the Marathas but the real incidence of the *chautha* was considerably more than one-fourth of what the peasant paid to their legitimate sovereign.
Chura	.. Parched flattened rice—a common cheap but highly nutritive diet in the countryside.
Dal ..	.. Pulse.
Desi ..	.. Indigenous.
Dhan ..	.. Paddy.
Dhoti ..	.. A garment usually five yards in length and 44" to 50" in width worn to cover the lower part of the body.
Diwali	.. A festival observed on the 14th and the 15th days of *Karttika* celebrated with illuminations and fireworks.
Ganesa Puja	.. The God of Wisdom who is propitiated for the fulfilment of a desire—the Hindus worship this God first on all sacred occasions and ceremonies.
Ganji ..	.. Jacket—an inner garment for the upper part of the body for the males.
Gauda ..	.. Originally a part of Bengal but later on the name denoted the entire province of Bengal.
Ghat ..	.. A place where facilities for crossing the river exist.
Ghi ..	.. A clarified milk butter.
Gola ..	.. A storage for grains.
Goshala	.. A philanthropic institution where usually old and decrepit cattle are maintained. *Goshala* is also meant for ordinary cattle pens and usually supplies milk.

Hartal .. A spontaneous closure of shops and normal civic activities on some momentous occasions, the word is also used to denote sponsored strike.

Hathia .. *Hathia* is one of the 27 *nakshatras* of the Hindu calendar calculated according to the phase of the moon.

Hathia rains still rule the agricultural economy of the country-side. Failure of *Hathia* rains usually brings in scarcity.

Hats .. .. *Hats* are the primary markets in the country-side held daily or weekly. Besides the sale of agricultural products and consumer goods *hats* are a great meeting place in the country-side.

Jaigir .. .. A royal grant of rent-free land in recognition of certain loyal services.

Jama .. .. Rent.

Janmashtami .. A festival to honour the birthday of Lord Krishna.

Jhula .. .. A closely sewn blouse worn by the women in the country-side for the upper part of their body.

Kaivartta .. A particular caste of the Hindus who used to earn their living by catching fish. They are generally *Proto Austroloid*.

Kamarup .. It is the ancient name of the Province of Assam.

Karushas .. The Karushas originally dwelt in the Rewa district but later on migrated towards the south-east and occupied the hilly tracts of which Shahabad is the centre. The ancient *Karushaa-desa* spread to the confines of Orissa in the east.

Khajura .. A date tree.

Khesari .. A kind of pulse usually consumed by the poorer classes. Constant use of *Khesari* leads to a kind of paralysis.

Khilat.. .. Investiture or title.

Kist .. .. Instalment.

Kodo .. .. A kind of millet usually consumed by the poorer sections of the people.

Kosa .. .. Two miles will be equivalent to one *kosa*.

Kurta .. A loosely sewn garment for the upper part of the body of males.

Magadha .. It was an important area covering roughly the present districts of Patna and Gaya.

Mahajans .. Money-lenders.

Makara Parba .. A widely observed festival celebrated on the day when the sun enters *Makara* (zodiac sign of Capricorn).

Maktab .. An indigenous Islamic school where basic Urdu is taught.

Malguzari .. Rent.

Melas .. .. Large fairs usually with a religious or economic background.

Muharram .. An important festival of the Muslims, especially of the Siyas.

Nagara .. Distinctive style of the mediaeval temple architecture of Northern India. The *Nagara* temples have square sanctum and parabolic *sikhara*. The cruciform plan and *Rekha* temples are the two other sub-types of the *Nagara* style.

Nala .. .. An artificial channel or a small rivulet.

Ojha .. .. The Soothsayer—a witch doctor, whose advice is usually sought in cases of epidemics.

Pana .. .. Betel leaf dressed up with areca-nut, lime, clove, etc., is usually passed on after a feast or as a matter of courtesy.

Parba .. A festival.

Parganas .. Fiscal units consisting of a number of villages.

Pattas .. .. *Pattas* are title deeds executed by the landlord in favour of the tenants while the tenants execute an agreement which is known as *kabuliat*.

Pir .. .. A group of villages.

Rathayatra .. A festival celebrated on the 17th of *Asarha* when a chariot containing images of some deities is drawn from place to place.

Rekha .. .. A variety of *Nagara* style of temples generally met with in Orissa.

Salabhanjika .. A woman holding the branch of a tree or embracing a tree has been a popular motif in some of the ancient Buddhist sculptures at Bharhut, Sanchi and Bodh Gaya, etc. The trees are usually taken to be *sala* trees (*Sorea robusta*) and the conception is basically erotic.

Sanad .. A court order conferring some privilege or monetary consideration.

Sasti .. .. A ritual observed on the 6th day of the birth of the child.

Sikhara .. Tower of a temple.

Sikka .. .. Coin.

Sikari .. Chain, an ornament.

Sindurdan .. It is an essential part of Hindu marriage where the bridegroom puts vermilion on the forehead of the bride.

Sraddha .. Rite observed for the spiritual salvation of the departed soul.

Subedar .. Subas were big units in the country and men in charge were known as Subedars. They were almost like Governors.

Sumhadesa .. It denoted the south-western part of Bengal.

Tabiz .. .. Amulet usually worn to ward off the evil eye.

Taccavi .. It is a loan advanced by the State to the agriculturists.

Tanka .. A monetary unit which has given rise to the modern rupee.

Tilaka .. A mark put on the forehead—invariably at coronation time.

Tirtha .. A place of pilgrimage.

Tols .. .. Indigenous oriental schools where basic Sanskrit is taught.

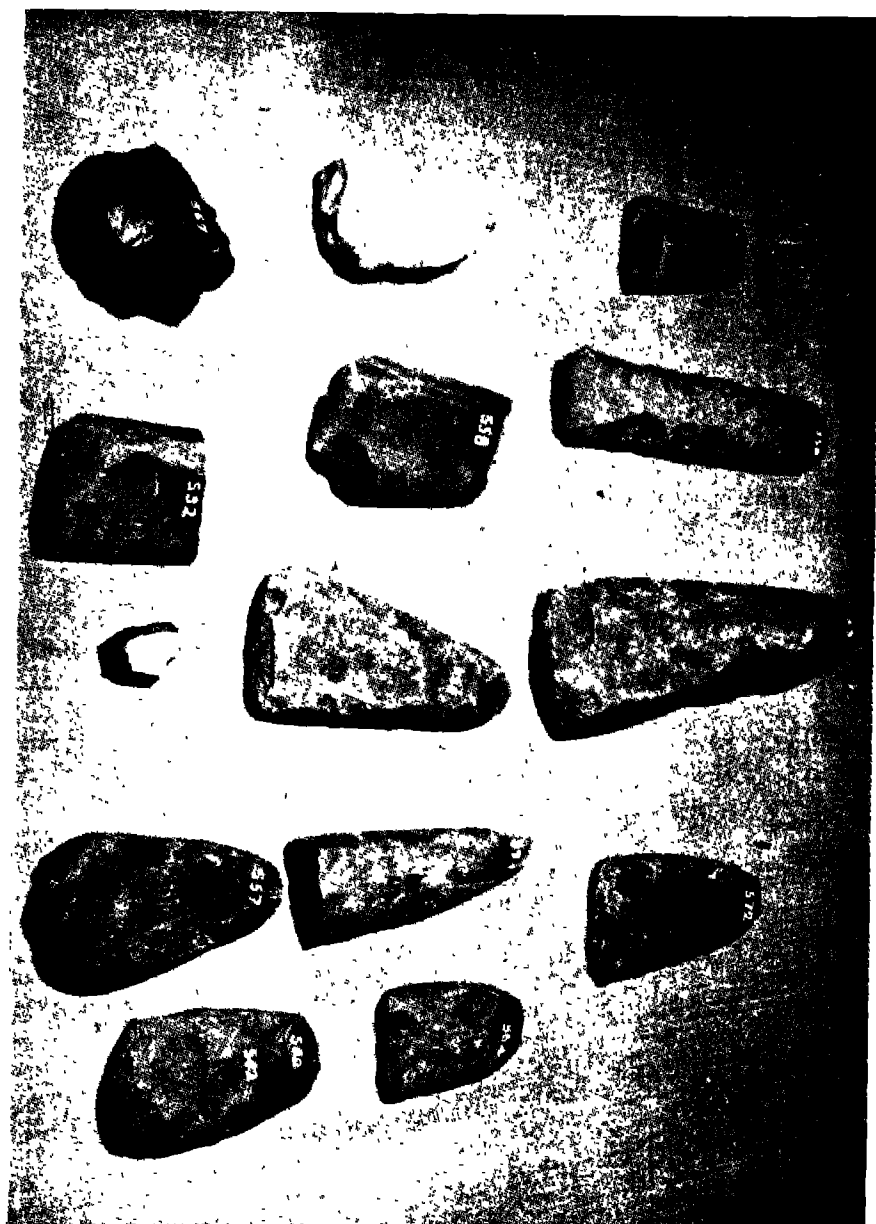
Urzi .. .. A petition.

Vaidya .. Practitioner of Ayurvedic system of medicine

INDEX.

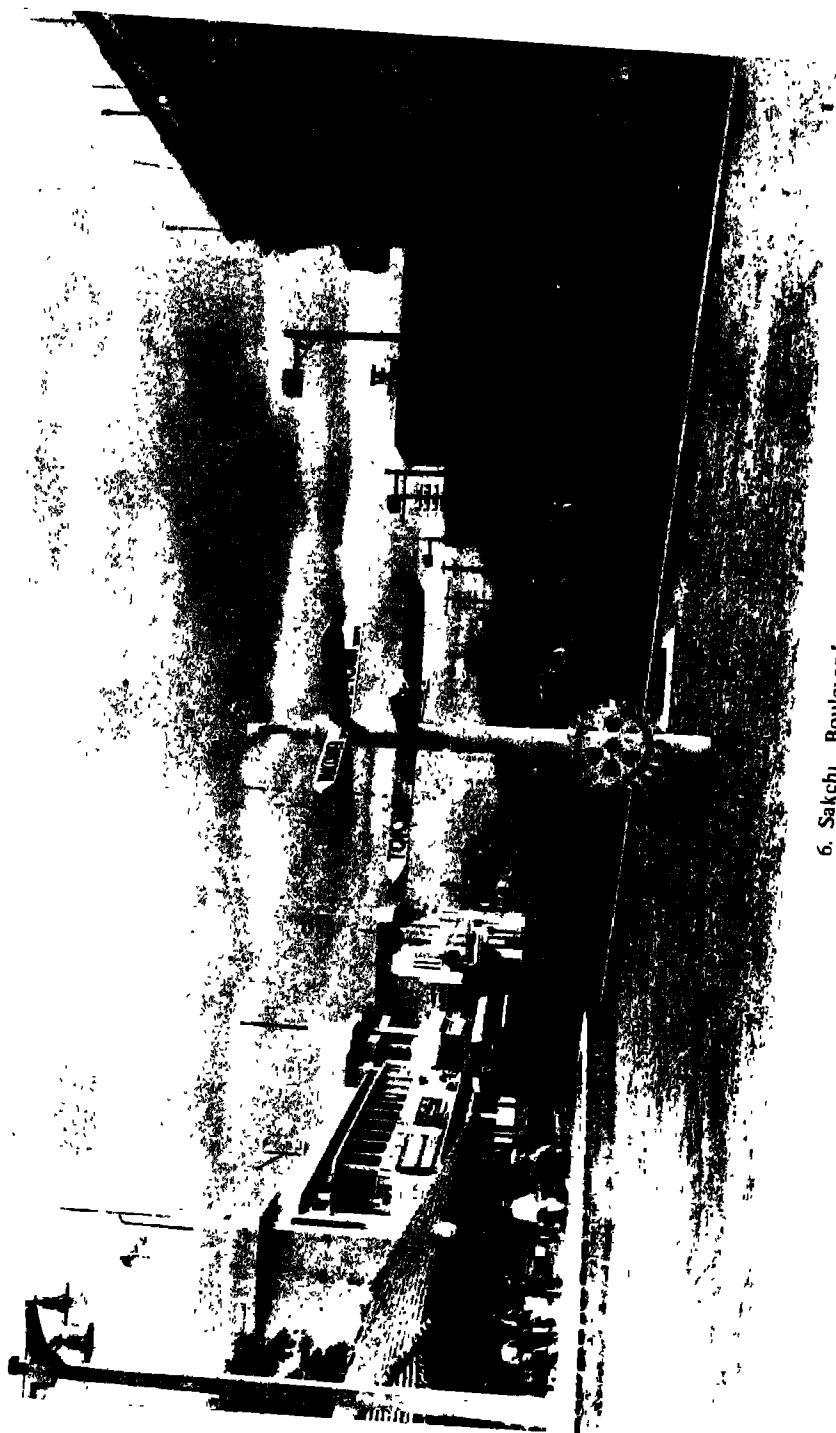
INDEX.

PLATES.

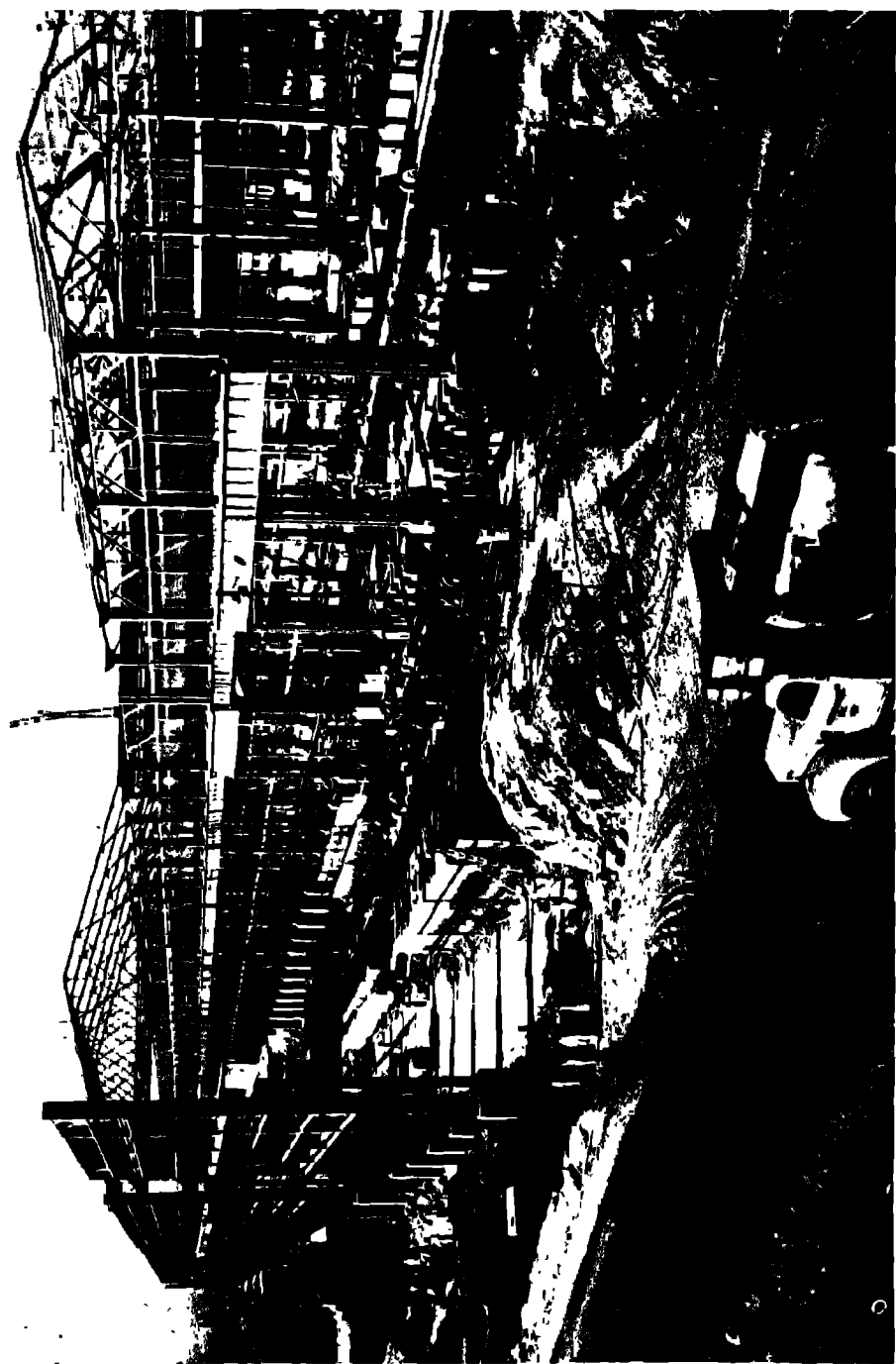
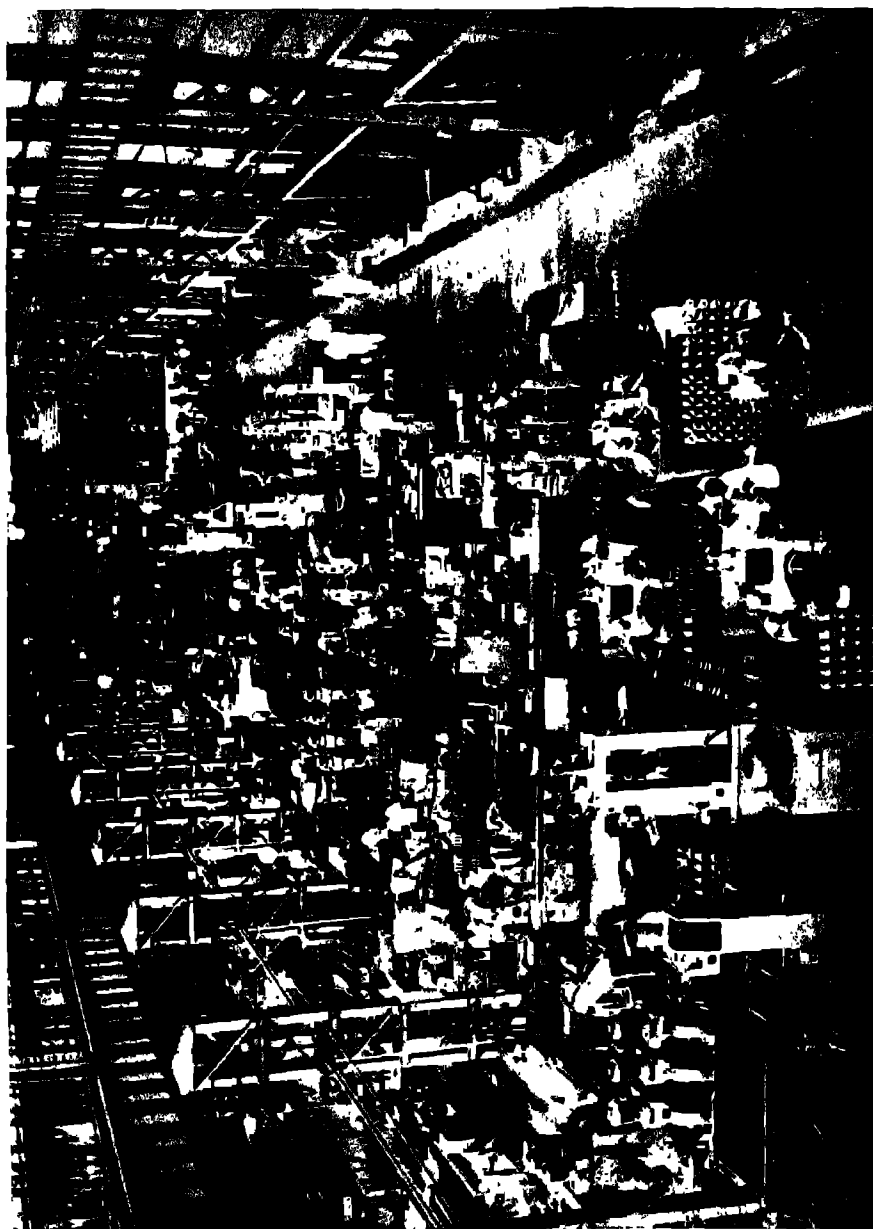
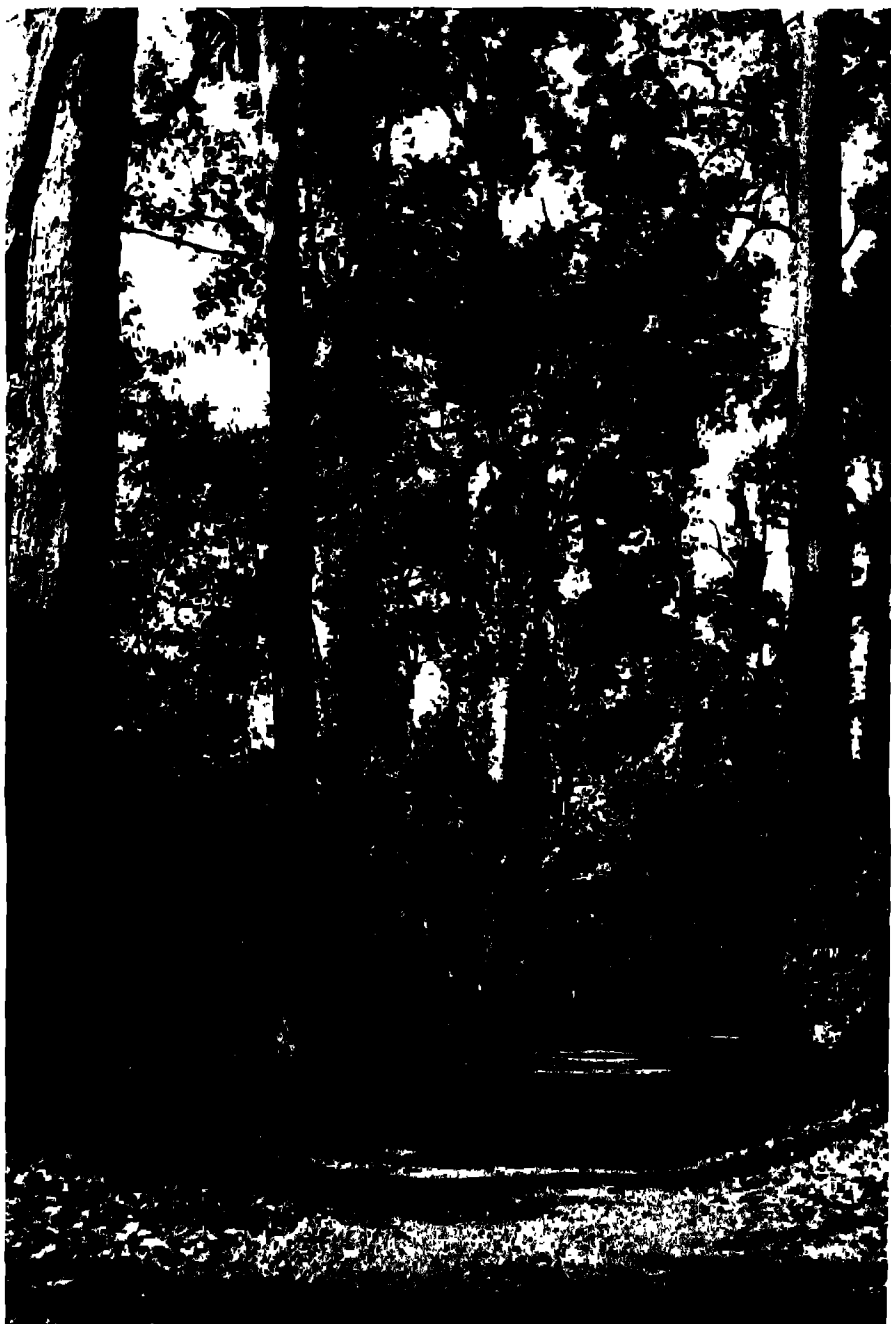
1. Palaeolithic implements from Singhbhum (Patna Museum).

2. Stone implements from Singhbhum (Patna Museum).

3. Surya image from Singhbhum (Patna Museum).

4 Vishnu image from Singhbhum (Patna Museum).

5 Sakchi 1909.

6. Sakchi Boulevard.

7. Dimna Lake Spillway.

8. Panoramic view of the Tisco.

9. Construction of new Mills under two million programme

10. Telco—A view of the Automobile Division Shop.

12. And quiet flows the Deo in the forests of Singhbhum.

11. Afforestation of Sal trees

14. Sal trees.

15. Ho women with their children.

16 A forest scene.

MAPS.

BSP(Rev)32—Lino—2,000—18-10-1958—MCM & others